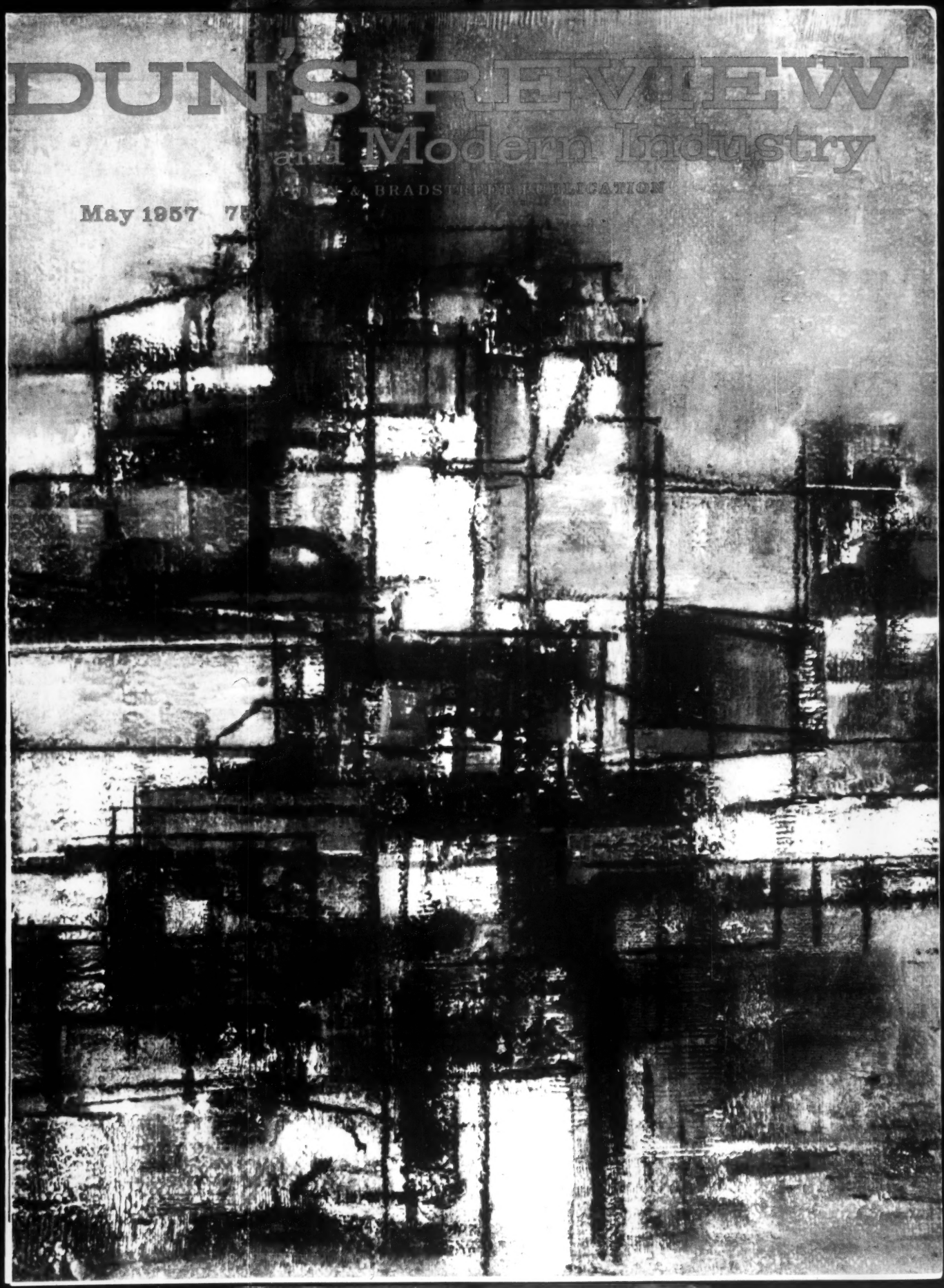
DUN'S REVIEW
and Modern Industry

A DUN & BRADSTREET PUBLICATION

May 1957 75



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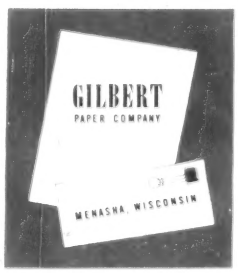

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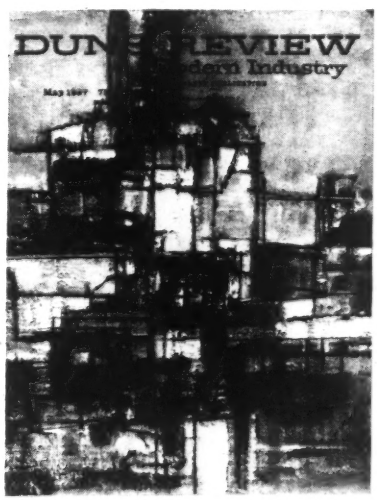

Paul August Kontny, a young German artist and an exponent of modern expressionism, frequently turns to industry for his subjects. His painting on this month's cover, *Industrie-Werk*, depicts a section of a cat-cracking plant. From the private collection of Samuel Weiss.

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DUN'S REVIEW and Modern Industry

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DUN'S REVIEW AND MODERN INDUSTRY, May 1957, Vol. 69, No. 7. Published monthly by Dun & Bradstreet Publications Corp., J. Wilson Newman, President. Publication Office: 300 West Adams St., Chicago, Ill. Editorial, Advertising, and Subscription offices: 99 Church St., New York 8, N. Y., Entered as second class matter at the Post Office, Chicago, Ill.

Address all correspondence to the New York office. Subscription: $5 a year in USA and Possessions, and Canada. Elsewhere, $10. Single copy, 75 cents. Please state title and employing company when subscribing.
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How to get your shipments out faster, at less cost

New 16-page booklet shows how easily it can be done through more systematic addressing of cartons, labels and tags

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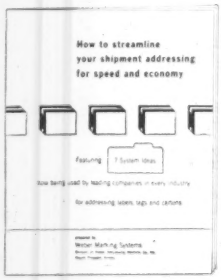
Efficiency-wise companies are rapidly discovering that the key to a really efficient shipping operation is a system for addressing. This system should be fast, inexpensive, require a minimum of labor, and be tailored to your particular order-processing and material handling procedure.



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• There was an old vaudeville joke about the visitor to Manhattan Island who stared in wonder at the construction in progress. He asked a passerby, "What building is that?" "Don't know, partner, it wasn't there yesterday." Annesta R. Gardner, our industrial editor, brings this old chestnut into the realm of reality and sobriety in her article on "30 Ideas for New Plant Buildings." Prefabricated domed buildings of aluminum or laminated woods arrive on the scene and are put together by giant fingers in a few hours. Even rubber gets into the act as a time-saver, and people have been living and doing business in glass houses for several years. All of which demonstrates that in every problem there is the germ of remedy, and as long as man is curious, ingenious, and energetic we will find the answer.

• Wayne Broehl is a young college professor who hears the pointed questions of college boys about to enter commerce and the professions, and he reflects some of their thinking in his article, "Ethics and the Executive." There are always the day-by-day tensions of pragmatism and principle—the short-term advantage and the long look at the ethics of a decision that may pursue and trouble the corporate conscience for decades.

Ethics cannot be divorced from moral standards, nor human values from the spiritual. If the competitive impulse tempts the executive into half-truths, evasions, or exaggerations, he will not be happy in the long run. The halo of the business man has been badly dented by stone-throwers over the generations, but there is still a glow of virtue around his bruised cranium. Speaking generally, he has the will to be honest, fair, and decent even if he is the sinner who falls thrice daily and rises to repent.

• The current trend toward mergers —which are dealt with at length in this issue—makes it necessary for many companies to pick new names

"re: *Your shipment on the 5th...*"

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Others use DATAFAX—the fast Stewart-Warner electronic way to transmit all data over telephone lines.

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"How can one forcefully bring himself to the attention of management?"

"Is there really any short-cut to success?"

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Many a man wakes up with a start in his thirties or forties to find that his income has leveled off, and that promotions have ceased.

"I'm not getting ahead as fast as I should," he says to himself. "Where am I going to be ten years from now?" Why does this pathetic pattern appear in so many promising careers?

The answer is simple: Sheer ability and energy can carry a man to the mid-way point in business . . . *but only a thorough knowledge of business fundamentals can help him beyond that point.*

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with broader connotations. In the June issue, James M. Vicary will consider various aspects of the name by which a company is known, legally and publicly. Frequently the goodwill value of a name is a determining influence in effecting a merger.

Mr. Vicary will not go into the longevity of company names, or of companies under a single management or proprietorship, but it is amazing how many concerns have survived for more than 100 years. The DUN & BRADSTREET Business Library has a collection of more than 700 volumes of anniversary books and brochures on American industries, merchandisers, and banks, many of them century plants. The number of concerns in business before 1900 that are still operating runs into many thousands, though some of them have changed their corporate names because of product changes or diversification.

● Shortly after talking to Dean Louis M. Hacker about a biographical article on Alexander Hamilton that DR & MI will publish soon, I stood on the brow of the Palisades watching the S. S. *United States* twist her huge bulk in the Hudson and slide into her marine stable on the Manhattan side. Turning for a moment, I noted a historical legend stating that this was the site of the Hamilton-Burr duel of 1804. Here Hamilton received his mortal wound (and here his son was killed in a duel three years earlier). Hamilton died at 47, and it is amazing that a young man could accomplish so much in so short a time—considering the day in which he lived. The young men who shaped the future of the country, Hamilton and his political foeman, Jefferson, were in their 30's when momentous decisions were made. And yet there were the mature sages, too, Franklin and Adams, accepting the full responsibility and risk of their actions.

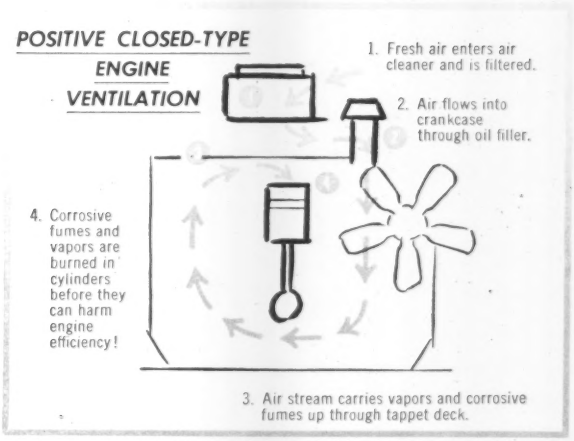
We can't live in the past, but it is a foolish man who doesn't go back once in a while for a perspective on world events, and for sane business logic. The voice of the individual is always an instrument of power when there are principle and vision behind it, and Hamilton had both, despite the long memory of critics, and American business men are indebted to his genius and courage.

—A. M. S.

"CLEAN LIVING" GIVES A CHEVY ENGINE

. . . more evidence that Chevrolet Task-Force trucks are engineered better and built better for bigger savings!

This drawing shows, roughly, one of the ways in which Chevrolet truck engines minimize a major cause of wear—dirt! Now consider this additional evidence that Chevy heavy-duty V8's and 6's "live clean" and bring you fleet, dependable power that costs less to use!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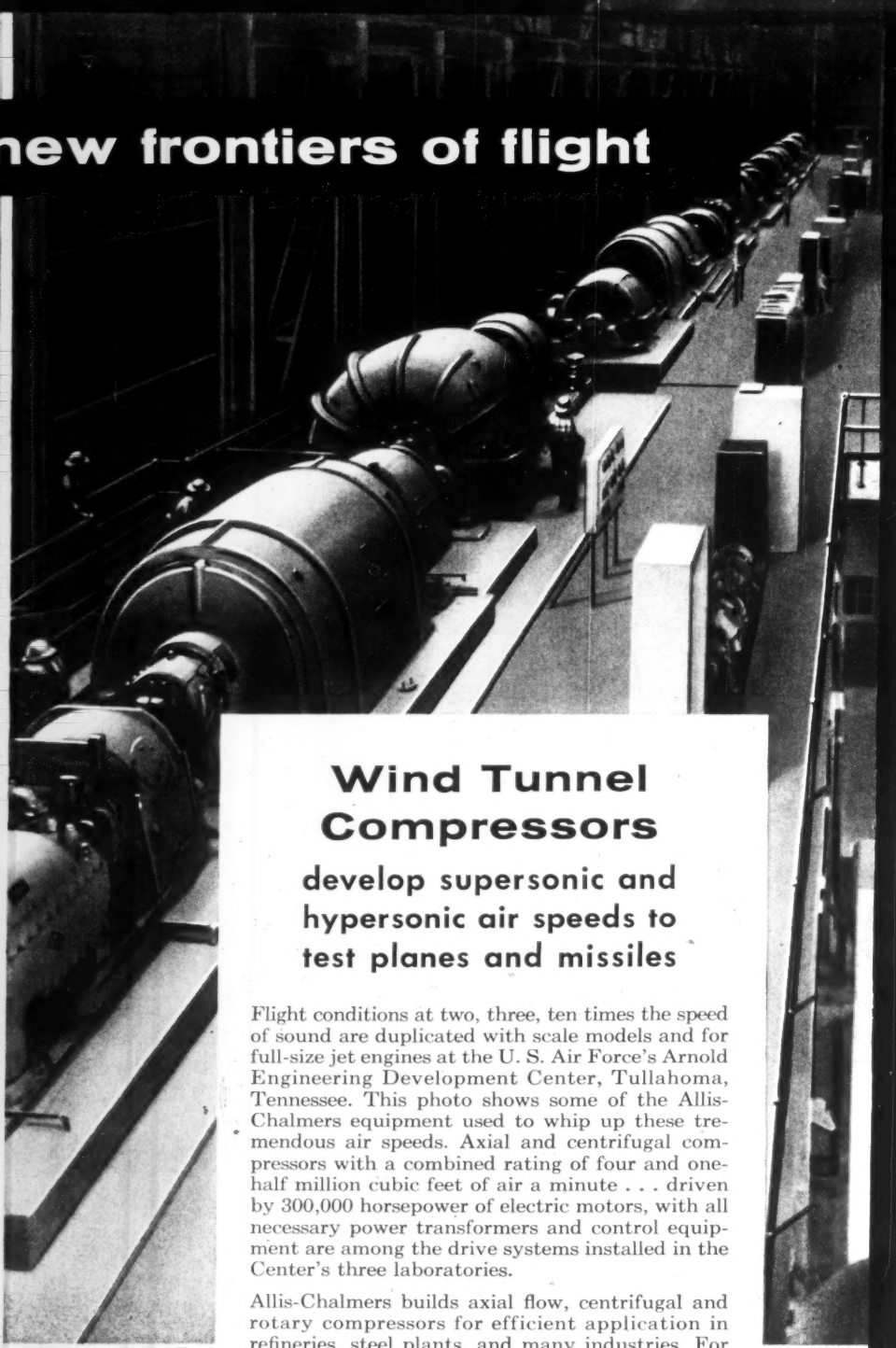

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HEARD IN WASHINGTON

PUBLIC DEMAND for economy in Government spending, dramatized by the greatest flood of protest mail in many a day, puts new pressure behind the unimplemented recommendations of the Hoover Commission.

Meyer Kestnbaum, special assistant to the President, has obtained, with difficulty and modifications, acceptance by Executive Department heads of 202 of the 479 recommendations. An additional 151 of the recommendations have been accepted in part. Fortunately Kestnbaum and his staff have made an analysis and explanation of the position taken by officials of the different executive agencies. As a result, the Administration is in a position to go before Congress with a well-documented case for changes that, if adopted—and it is a big "if"—would result in savings of about $2.75 billion. This would be about half the estimated savings resulting from the implementation of all the Hoover Commission recommendations. The changes suggested would not only save dollars but mean more service per dollar.

While literature is full of such expressions as "change is inevitable in a progressive country," Kestnbaum has found that resistance to change is a powerful force in Washington.

While Congress is inclined to be hypercritical of many of the recommendations, the most intense opposition naturally comes from the executive agencies where economic and efficiency changes would affect jobs and administrative prerogatives. Another claim is that during the Roosevelt Administration many persons of the "planning" type were brought into the Government. Their influence is being exerted, it is contended, to prevent curtailment of centralized activities. Such sources feed Congress, usually surreptitiously, the arguments against change.

Since so much of the opposition comes from "vested" interests within the Executive Branch, the division of the U.S. Chamber of Commerce that watches the progress of the recommendations feels that the President has not given the pending suggestions the necessary support.

Congress is also blamed as a major offender for not approving some of the most important recommendations. It has taken a position, for instance, against consolidating the supervision of banks in one agency. And preparation of statistics that Congress thinks important is to be dropped if recommendations are followed.

Congressional opposition is not entirely partisan. There is no doubt that adoption of the budget and accounting recommendations would greatly increase the work of the appropriations committees in both houses.

The reflection on their past efficiency has also nettled the committees. Congress takes the position that many of the recommendations are not realistic. Accountants, without government experience and with a limited knowledge of the philosophy of government, dominated the task force.

One of the most costly things in government is rapid turnover in personnel. Hoover says the same rate of turnover in a private business would bankrupt it. One recommendation suggests salary increases in the higher brackets. The opposition on the Hill to that recommendation is not so strong as it is to some of the others.

There is no doubt that a majority in Congress wants the Government to stay out of commercial activities where private industry can provide adequate service. The majority, however, also inclines to be lethargic, whereas supporters of public power and government-in-business are very active and vocal. This fact, plus a good job of log-rolling, has blocked progress on that recommendation. Here again the Administration is criticized for lack of aggressiveness.

Five recommendations were made in connection with policies of lending agencies. Hidden subsidies were to be eliminated and the agencies put on a self-sustaining basis. Nevertheless, the budget contains over $50 million for those agencies.

Washington notes

Far-reaching developments affecting organized labor are expected to grow out of the Senate investigation. The most striking changes will be internal reforms in the labor unions themselves. Greater rank-and-file participation in policy making is foreseen. Federal legislation will probably be limited to requirements that financial statements be submitted to the Labor Department and that pension funds be audited independently and set up in some form of trust. Use of funds for political purposes may be curtailed further. Nothing so drastic as the application of the antitrust statutes to unions or the curtailment of nationwide bargaining is likely to come from Congress. The Senate is anxious that its committee handle investigations in such a way that it not be accused of

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labor-baiting. Right-to-work amendments to the civil rights bill are for the purpose of making that bill harder to pass. No Federal right-to-work law would have a chance. Tough state legislation may result, however. Demand for right-to-work laws is expected in many states.

In line with Administration policy of decentralization, the Department of Labor is giving increased attention to aid to states in preparing their own labor legislation.

When conservative Walter Williams, Under Secretary of Commerce, foresees a time in 1965 when American consumers will buy $1 billion worth of goods and services in a single day, it attracts attention. He has an unusual approach in spotting sales opportunities. He points out that half the nation's families take no vacation; that 85 per cent did not buy a new car last year. He carries it further: 90 per cent did not buy a refrigerator; 90 per cent did not buy a radio; 95 per cent did not buy a home freezer; 95 per cent did not buy a clothes dryer; more than 99 per cent did not buy a dishwasher; and more than 99 per cent did not buy a color television set. "They talk about markets reaching the saturation point," he exclaims. "What about mounting population?"

Following the recommendation of Treasury Secretary George E. Humphrey that a campaign be undertaken to educate the public to "the facts of life about Federal spending," the U.S. Chamber of Commerce expects to intensify such efforts. Humphrey is sure it would be in the public interest to curtail Federal contributions to many local projects. He hopes the people will continue to insist that Federal spending be brought under better control. The Chamber of Commerce feels that its clinics and other "grass roots" evangelizing were a factor in the deluge of protests against the rate of spending proposed for fiscal 1958.

So much support for a national monetary and financial commission has come to the attention of Congress that action on the President's

request appears likely. But Congress probably will not grant the President's request that the commission be made up entirely of private citizens. It will insist on representation.

Some Washington sources see evidence that the fear of further inflation is declining, though certainly nothing deflationary is causing concern. One of the top jobholders put it this way: "Upward pressures are diminishing. No significant pull downward is in evidence."

Moderation of credit pressures in the private field is due, to some extent at least, to a shift in the burden to the Treasury. Large-scale redemption of Government securities simply means that the Treasury is having to borrow more. An additional strain is imposed to provide aid for housing. The international agencies are turning back securities to provide funds for their loans. Some have drawn the conclusion that there has been a shift in Federal Reserve policy. It can be stated authoritatively that this is not the case. Pressure on Government bond prices affects other markets. Rather than becoming easier, in fact, money may be tighter.

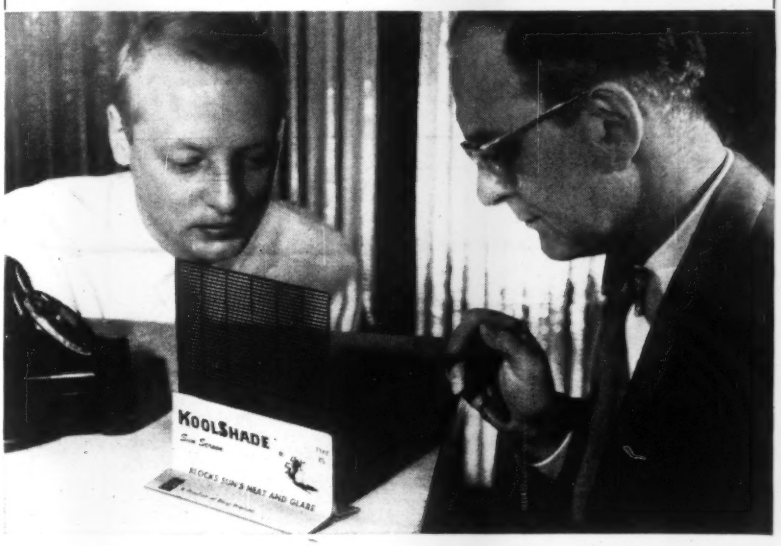
Nonmanufacturing employment has been outrunning employment in manufacturing, despite labor shortages in the latter category. The demand that cannot be met is where skills are required. This has led to pirating and points up the need for upgrading those already employed. Apprentice training agents are urging employers to screen their labor force for those specially qualified and to set up training courses.

Few members of Congress have any real hope of securing tax reductions at this session. There will be talk about it, but nothing important will get through. Leaders in each party would rather deal with the matter in 1958, an election year. In fact, a minimum of legislation is expected at this session.

Paul Wooton

WASHINGTON, D. C.

It costs money to cool sunshine!



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VOICE OF INDUSTRY

Along the Schuylkill River at Philadelphia—Howe Photograph

How realistic is America's foreign aid and trade policy? How effective is management decentralization? What are the real facts and challenges America faces abroad? Here are some specific top management views.

THE HOW AND WHY OF FOREIGN AID

HENRY FORD II, *President, Ford Motor Company, before the National Automobile Dealers Association*

We should get rid of the childish notion that we are out to buy love or friendship. Our foreign aid money should be spent in such a way as to represent the best we have to offer in ideas, in people, and in portraying the strength of our society to peoples abroad. But we should recognize that no one is going to love us for what we give them. We are much too big, too rich, and too powerful for anyone to love us. What we should expect is that other nations will realize our friendship is to be desired and our antipathy to be avoided in their own best interests.

As a business man, I am naturally concerned with this situation from a business viewpoint. I feel, for example, that an enlightened trade and aid outlook is sound not merely because of the Soviet threat but because it is in our own best long-run business interests to strengthen the economies and raise the living standards of the people we want to do business with all over the world. . . . In another realm, I think we've got to take a new look at our relations with the Communist satellites. Thus far we have tended to apply economic sanctions in the form of drastic trade limitations and laws which largely prohibit us from offering them economic help. Even to suggest that we should help out some of these people or do business with them has been to risk the charge of being soft on Communism. But it appears that our policies have tended to play right into the Kremlin's hands to the extent that they make the satellites more dependent on Moscow. I think we need to be realistic and decide whether our trade-and-aid policies toward such satellite areas as Poland, Hungary, East Germany, and even Red China are really in our own best interests.

Maybe the people of Red China are just as anxious to get rid of the yoke of Communism as the Hungarians have demonstrated they were. Shouldn't we give them the chance

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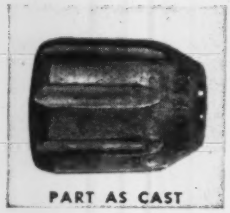
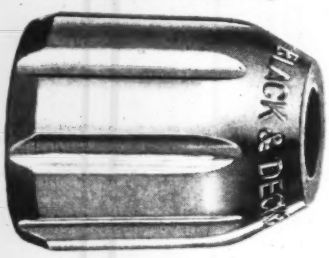
now you can get this brilliant finish directly on zinc die castings!

No electroplating--no mechanical finishing!



PART AS CAST



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—or at least some alternative to their present ties with the Kremlin?

DECENTRALIZATION: FACT OR FANCY?

MATTHEW M. GOUGER, *Vice President, General Aniline & Film Corporation, at American Management Association Personnel Conference*

Decentralization could well be labelled the industrial fad of the moment. While we imply the decentralization of both authority and responsibility, the facts are that responsibility cannot be decentralized. The American concept of business does not permit the titular head of a company to pass one iota of major responsibility on to his subordinates. To assume that the front-line supervisor is not fully aware of this is to do him an injustice. The argument is advanced that the front-line supervisor will perform better when he has full authority, but this is questionable because he recognizes his inability to grapple with all the complexities of his job.

Decentralization proponents might answer this by saying that the only way to develop a subordinate is to give him full authority. This is comparable to the idea of teaching some one to swim by tossing him into deep water. The technique was abandoned long ago for obvious reasons.

Some of the outstanding industrial leaders and prominent proponents of decentralization are now recognizing that certain functions of the organization can be more efficiently performed under centralized control or administration. As technological innovations provide unheard of efficiencies, concepts of decentralization need reexamination.

Tides of political and social concepts are in many instances running toward centralization. The average company's major problems are with organizations moving toward further centralization and the development of highly specialized skills. Our Government is obviously moving toward centralized control. The increasingly national character of organized labor, completely centralized in form, may

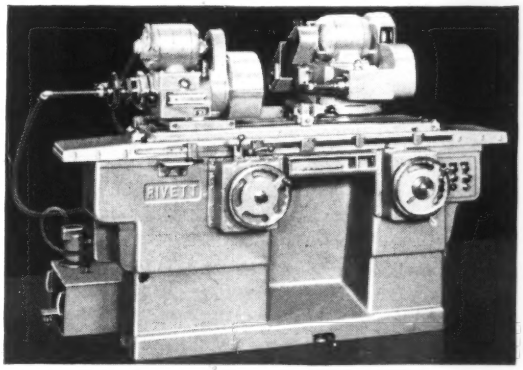
CUTLER-HAMMER

MOTOR CONTROL

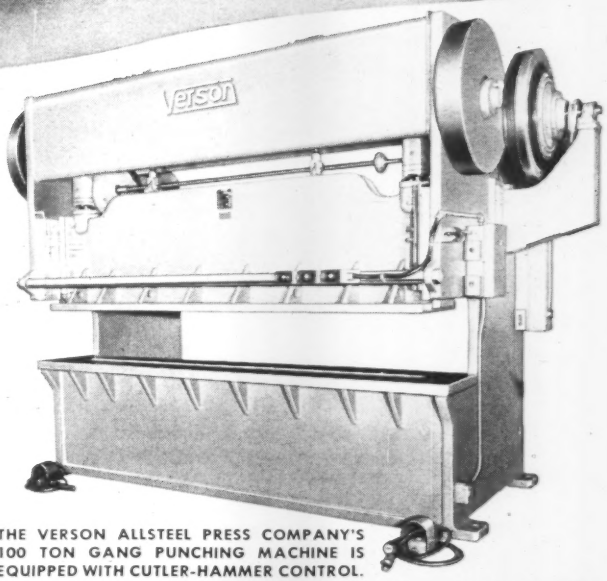
C-H

CHOICE OF THE LEADERS

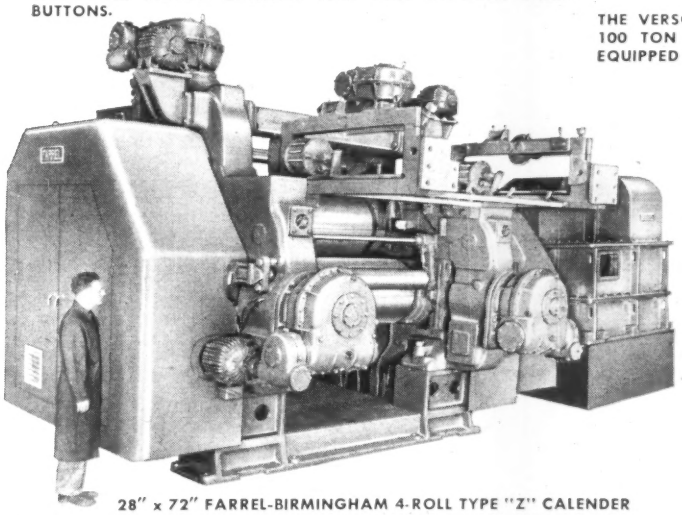
THE MARK OF BETTER MACHINES



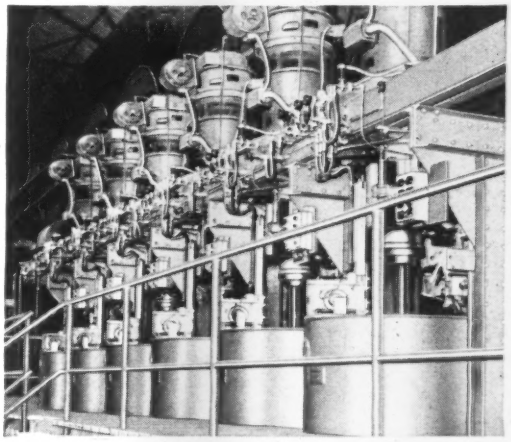
THE RIVETT 1024 INTERNAL AND UNIVERSAL GRINDER MADE BY RIVETT LATHE AND GRINDER INC., INCLUDES CUTLER-HAMMER THREE-STAR MOTOR CONTROL AND NEW OIL-TIGHT PUSH-BUTTONS.



THE VERSON ALLSTEEL PRESS COMPANY'S 100 TON GANG PUNCHING MACHINE IS EQUIPPED WITH CUTLER-HAMMER CONTROL.



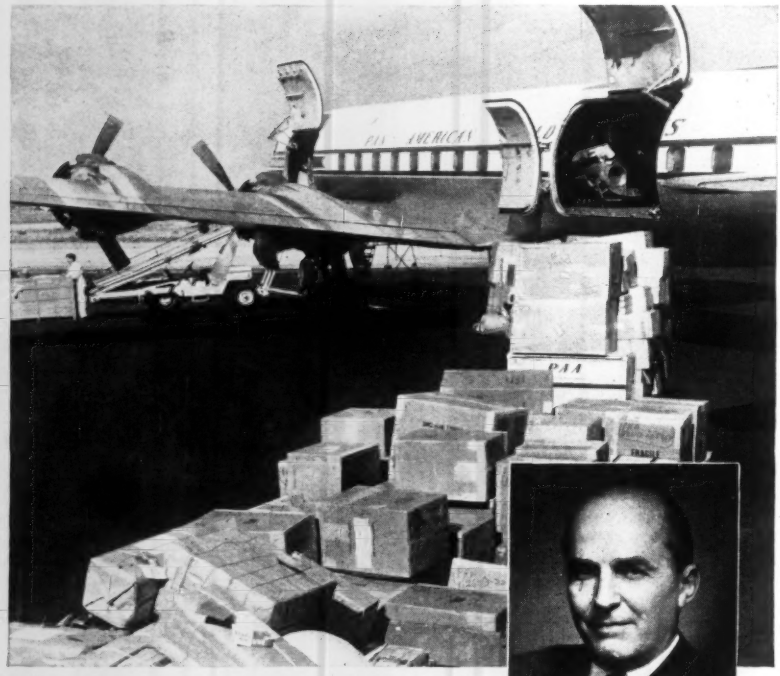
28" x 72" FARREL-BIRMINGHAM 4-ROLL TYPE "Z" CALENDER IS EQUIPPED WITH CUTLER-HAMMER THREE-STAR MOTOR CONTROL AND HEAVY DUTY OIL-TIGHT PUSHBUTTONS.



THE WESTERN STATES MACHINE COMPANY INSTALLS CUTLER-HAMMER THREE-STAR MOTOR CONTROL ON THEIR ELECTRICALLY DRIVEN CENTRIFUGALS.

Stars that have no Equal

There is no such thing as the manufacturer of a bad product in American industry; competition is too keen for such a company to live. But there are degrees of merit. Among machinery builders, there are those whose products are accepted as being better than others, and a few whose machines are widely recognized as the best. These machinery builders are the acknowledged leaders in their field . . . *they have no equal*. This position of leadership was not easily won nor is it held without constant attention to every detail which influences the product's performance. It is most significant that so many of these leaders standardize on Cutler-Hammer Three-Star Motor Control as original equipment for their machines . . . *the stars have no equal*. Machinery buyers find Cutler-Hammer Motor Control a reliable guide to greater value and satisfaction. CUTLER-HAMMER, Inc., 1436 St. Paul Ave., Milwaukee 1, Wis. *Associate:* Canadian Cutler-Hammer, Ltd., Toronto.



Willis G. Lipscomb, Vice President PAN-AMERICAN says: "We are constantly seeking ways to operate more efficiently, in the air and on the ground. Executone Intercom in our offices, warehouse, and personnel areas more than paid for itself."

Pan-American counts on Executone to help speed Clipper*cargo!

In addition to the many special problems created by the urgency of flight schedules, Pan-American also faced the problems that plague many businesses, large and small. Inter-office calls jammed Pan-Am's switchboards...costly long-distance "call-backs" on urgent cargo shipments were common... employees were kept hopping between warehouse, office, customs area—and couldn't be quickly located.

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require a highly centralized counterpart in industry to deal with it.

1957: THE YEAR OF SHOWDOWN

LEO CHERNE, *Executive Director, Research Institute of America, Inc., before New York Sales Executives Club*

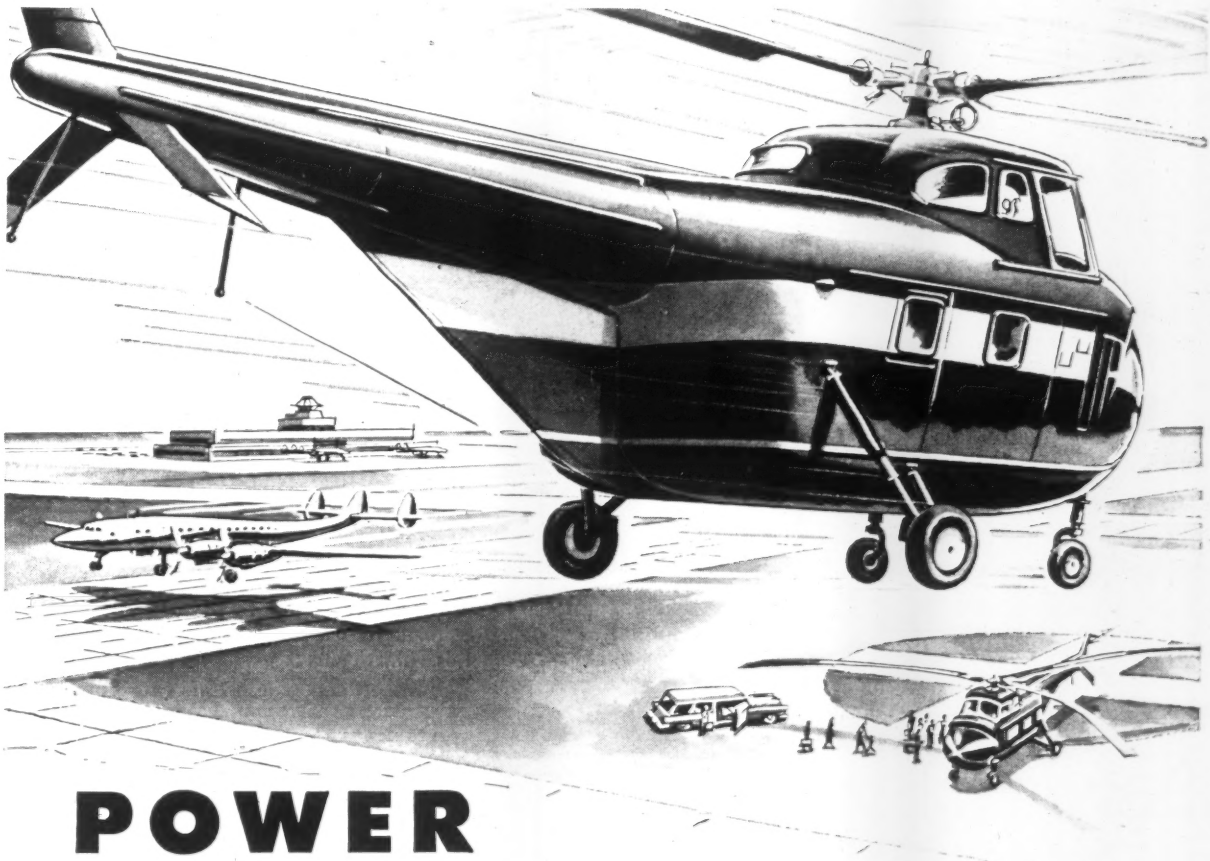
This is the year in which the coexistence policy between the United States and Soviet Union will finally come a cropper. We will find that Russia is in the Middle East and that the new Eisenhower Doctrine came too late to prevent her entry, but perhaps not too late to prevent her spreading the tentacles which already reach into Syria and Egypt.

In this year of showdown the probability is great that an explosion will occur in Poland or the Soviet Zone in Germany that will make the tragic and terrifying events in Hungary look modest in comparison . . .

We will learn this year that the Soviet Empire is in serious economic trouble and that the West has been helping to bail the Soviet Union out of its trouble by the enlargement of East-West trade.

This year we will really have to decide whether we are for liberation of the captive nations or whether we intend to remain fundamentally neutral each time they rise against their captors, for they shall rise again.

We will find that the United Nations is not a government and doesn't, in fact, have the capacity to perform even the minimal functions performed by minor governments. We may yet unwittingly go a long distance towards destroying the United Nations by having it act in ways in which only governments can act, by assigning it responsibility for which it has no authority, and by failing to do that which we, as the world's greatest power, have an obligation to do. In this year of showdown the United States will have to come closer to a decision on the fundamental question: Do we want peace at any price, or are we genuinely ready to risk war in defense of things we have in the past said we are for?



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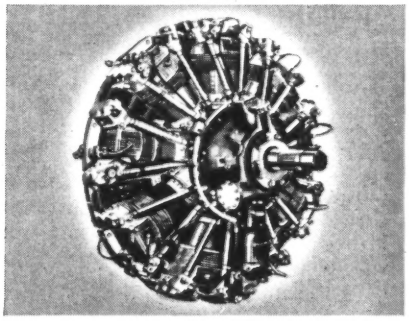

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Big helicopters like the Sikorsky S-58 — powered by a specially engineered version of the Cyclone 9 — today run on regular schedules city-to-city and airport-to-airport. Carrying as many as a dozen passengers and their baggage at high speeds, helicopters can land on postage-stamp heliports or an office roof.

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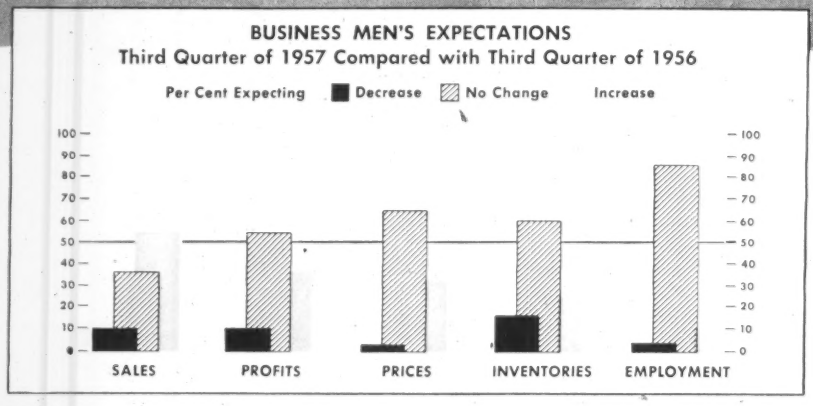
BUSINESS MEN'S EXPECTATIONS THIRD QUARTER 1957



Here is how 1,530 representative executives feel about the prospects for their own businesses in the third quarter of 1957. Interviewed recently by Dun & Bradstreet reporters, these business men were predominantly optimistic about their future sales, profits, and new orders.

HIGHER SALES and profits were in store for the third quarter of 1957, in the opinion of the business men interviewed in the latest DUN & BRADSTREET survey of business men's expectations. Executives expecting an increase over a year ago in their third-quarter sales were more than five times as numerous as those expecting a decrease. This was optimistic, but not quite so cheery as the survey for the second quarter was, when the "ups" outnumbered the "downs" by more than twelve to one.

It was the consensus among more than half (54 per cent) of the executives that their third-quarter profits would be as high as a year ago, while 36 per cent looked for an increase and 10 per cent were apprehensive of a decline.

With regard to both sales and profits, the manufacturers of nondurable goods were more optimistic than the business men in other lines. This contrasts with surveys last year, when the manufacturers of durables were usually the more optimistic.

But manufacturers of durable goods were far from distressed, even though they expected a drop-off in their new orders slightly more frequently than the producers of nondurables. A large proportion of the manufacturers of durable goods (45 per cent) still thought their new orders in the third quarter of 1957 would exceed the near-record volume in the comparable period of 1956. A similar proportion of the manufacturers of nondurable goods felt the same way.

Although the majority of the executives foresaw no change in their third-quarter selling prices as compared with a year ago, those expecting an increase were more than ten times as numerous as those expecting a reduction.

As in previous surveys, retailers were apparently feeling the pressure of competition more keenly than the business men in other lines. The proportion of retailers expecting to increase their prices was smaller, and the proportion expecting price reductions larger, than average.

While more business men expected that their stocks would be larger than a year ago than thought they would be smaller, this may not call for much change from current levels, since business inventories in the early months of 1957 were running slightly higher than in the third quarter of 1956. Retailers expected a reduction in their inventories more often than the other business men, while manufacturers of nondurable goods expected a reduction less frequently.

The maintenance of high employment levels in the third quarter of 1957 seemed assured since 86 per cent of the business men expected to need at least as many employees as in the third quarter of 1956, and 10 per cent expected to increase the number of people on their payrolls.

THE THIRD QUARTER OUTLOOK

A COMPARISON OF 1957 WITH 1956

Percentage Breakdown of Opinions Expressed

	ALL CONCERNS			MANUFACTURERS			WHOLESALERS			RETAILERS		
	Increase	Unchanged	Decrease	Increase	Unchanged	Decrease	Increase	Unchanged	Decrease	Increase	Unchanged	Decrease
SALES	54	36	10	57	35	8	50	38	13	52	36	12
PROFITS	36	54	10	40	51	9	32	56	12	33	56	11
PRICES	32	65	3	31	67	2	36	59	5	23	74	3
INVENTORIES	24	60	16	26	62	12	23	59	18	23	57	20
EMPLOYMENT	10	86	4	14	81	5	6	92	2	6	91	3
NEW ORDERS	..	..	..	45	47	8	..	..	..	..	..	..

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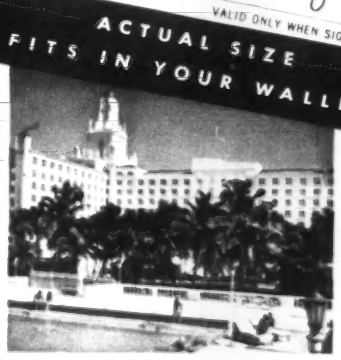

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Now you can have the convenience and prestige of a charge account wherever you go with an Esquire Club Credit Card. *Detailed information as to prices, hours, specialties, etc., accompany every one of the thousands of restaurants, hotels, car rental agencies, shops and other services listed in the Directory.* An Esquire Club Credit Card will end expense account headaches, making out petty cash slips, and carrying large sums of cash. You will be treated as a preferred customer everywhere—just sign for whatever you buy. One monthly statement itemizes every expenditure, serving as a reminder of business expenses as well as being an invaluable record for tax purposes. A small annual fee of $5.00 is all you pay for this extraordinary, international Esquire Club Credit service and *the one fee covers any member of your family or firm whom you designate to receive an additional Esquire Club Credit Card.*

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Company Address | City | State

Years with above firm | Position

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$5.00 Annual membership fee will be billed.

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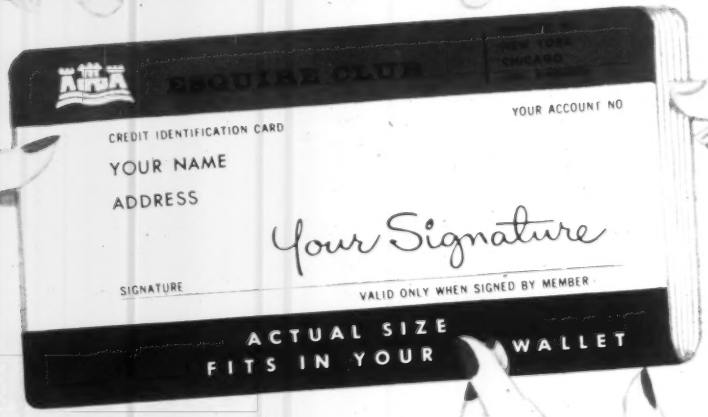

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HIGHLIGHTS *and sidelights*

comment by

Hanesta R. Gardner

That's a home, son

Looking at today's lavishly furnished trailers, it's easy to get the impression that these are purely luxury items.

Not so, says the Mobile Home Manufacturers Association. Over 60 per cent of today's trailers are bought by industrial and construction workers, and industry is beginning to eye them as homes for traveling exhibits and lecture teams.

The truck-trailer pictured below, for instance, was originally designed for military use (for an earlier military design see September 1956, page 18). But, says its manufacturer, Gerstenslager Company, "We feel it will find extensive use as a housing for traveling exhibits."

It's the little things that count

The one factor which today most severely limits our exploitation of nuclear power is not scientific, legal or governmental. . . . It lies in the ability of *conventional* materials to meet the exacting standards of nuclear power production. . . .

So says Admiral H. G. Rickover, father of the atomic-powered submarine, and he certainly should know.

As a matter of fact, operators of several reactors are having more trouble with heat exchangers, pumps, piping and other units—which are considered to be almost standard products—than with the nuclear core itself.

"We had expected," Admiral Rickover says, "that industry's technological know-how was sufficient to take care of modest departures from conventional practice. We found this not to be so; in fact, we found that industry frequently has inadequate understanding of the fundamentals even of straightforward applications."

For example, Rickover says, "Despite every design and operating precaution taken by us, we have experienced leaks in some of our steam generators. One corrective measure is to stress-relieve the stainless steel tubing. . . .

"The manufacturers of this equipment have had years of experience in fabricating tubes. Yet, when they were confronted with the requirement to stress-relieve stainless steel tubing, without surface contamination and distortion, they needed no less than five months to develop their processes . . . and we still do not have a good understanding of this technical problem."

This, certainly, is a challenge, if

Expansible truck-trailer can be used for meeting room, temporary living quarters, or even a permanent home. Built largely of aluminum, supplied by Alcoa, the truck-trailer has telescoping sides, and an accordion-folding floor, expands to a width of 26 feet.

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The Longines presentation watch has far more than symbolic value. Longines is the watch of highest prestige among the watches of the world. The name Longines on a watch is a contract of perfection of manufacture—a watch of virtually wear-free life. To choose Longines watches for your awards program is an assurance of its success. Though the Longines watches you choose may cost as little as $71.50, in the whole wide world there are no watches of finer quality.

We have prepared a comprehensive brochure of value to any organization planning a length-of-service, retirement, sales incentive or other awards program. To receive this booklet, fill in and mail the coupon below, or write for it on your business letterhead. Our plan includes service facilities of your local Longines-Wittnauer Jeweler Agency.

Presentation Sales Dept., Dept. D.
Longines-Wittnauer Building
Longines-Wittnauer Watch Co., Inc.
New York 36, N. Y.

Please send me your "Awards of Time" Booklet.

Name .....

Company .....

Address .....

City ..... State .....

drive gears in BOLENS TRACTORS

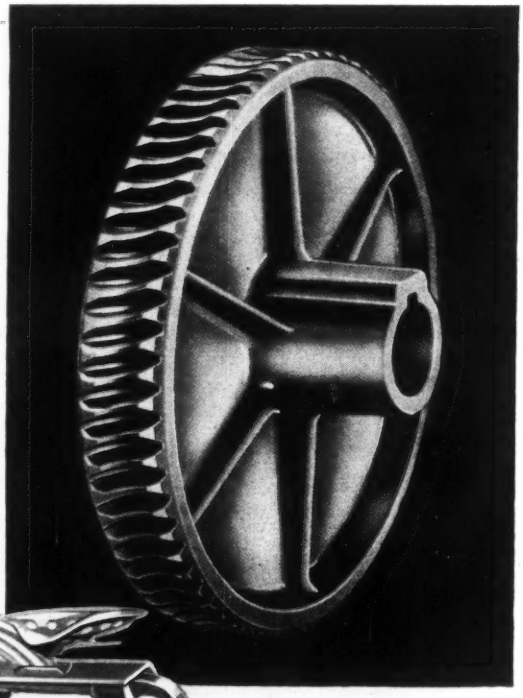
toughness of MUELLER BRASS

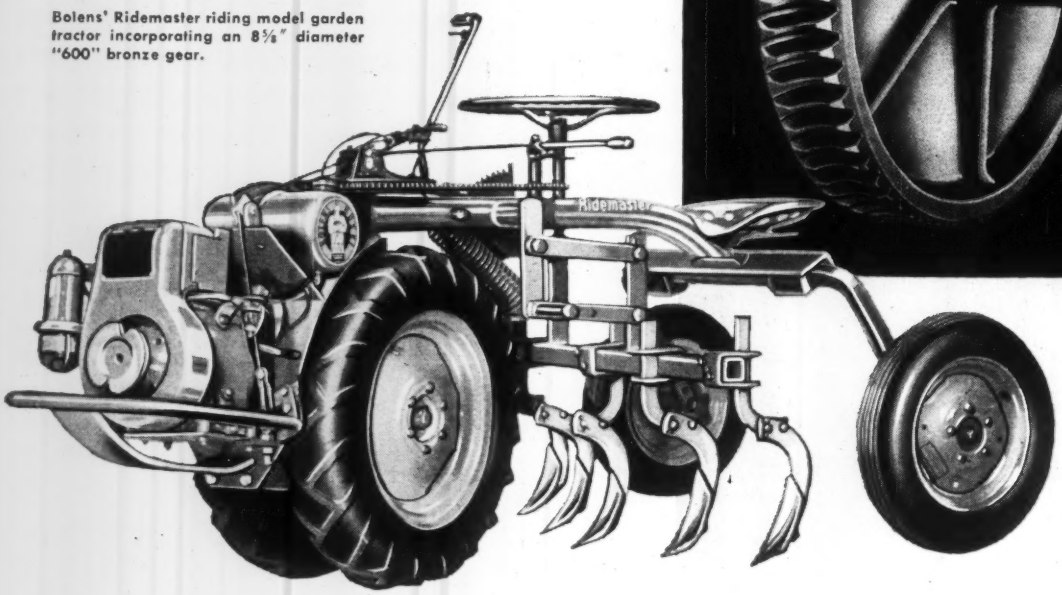
"600" series bronze alloys

Forged bronze gears made from tough, long-wearing Mueller Brass Co. "600" bearing alloy are proving their ability to withstand punishment in the popular outdoor power equipment manufactured by the Bolens Products Division of Food Machinery and Chemical Corporation, Port Washington, Wisconsin. The Junior and Super Mustang rotary tillers, all employ "600" main drive gears to dependably transmit engine power to drive assemblies. The going is rough for equipment of this type in cultivating or tilling heavy soil—but Bolens has a record for ruggedness and, on these and many other Bolens products as well, Mueller Brass Co. "600" gears help make possible that fine performance.

Mueller Brass Co. "600" bearing bronzes are available as forgings, or in rod form. They provide unusually high tensile strength, a dense structure, good resistance to corrosion, and excellent bearing properties. Because of their good machining qualities, the "600" series bronzes can be finished readily—usually at substantial savings in COST.

It will pay you to investigate these alloys for your products . . . why not write today for full information.

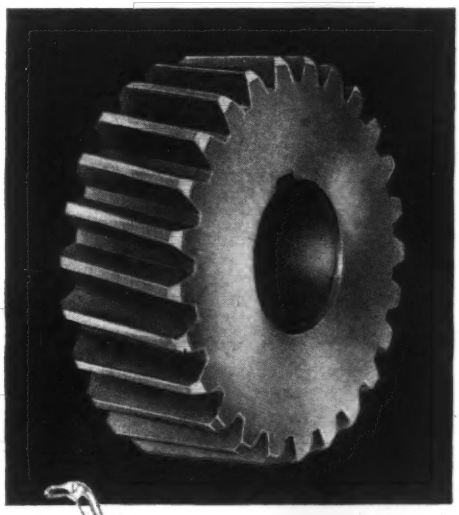




Bolens' Ridemaster riding model garden tractor incorporating an 8⅝" diameter "600" bronze gear.

and TILLERS prove

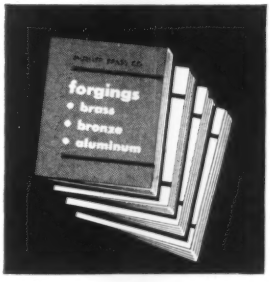
CO.



Bolens' Super Mustang rotary tiller incorporating a 25-tooth "600" series bronze worm gear.

WRITE TODAY FOR THE ENGINEERING MANUAL YOU NEED

- **Mueller Brass Co. Forgings** Engineering Manual H-58565 ☐
- **Tuf Stuf Aluminum Bronze Alloys** Engineering Manual H-58563 ☐
- **"600" Series Bearing Alloys** Engineering Manual FM-3000 ☐
- **Copper Base Alloys in Rod Form** Engineering Manual FM-3010 ☐



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MUELLER BRASS CO.

PORT HURON 38, MICHIGAN

METALS AND ALLOYS REVIEW

by FRANK M. LEVY

Vice-President and Director of Research

One of the most interesting things about our 600 series bearing alloys is the great variety of products in which they find application. In the advertisement to the left you can see how the Bolens people put 600 gears to work in their rotary tillers and garden tractors. Those gears are big, take a lot of abuse, and meet the job needs perfectly. We also make a lot of small parts, too, that have been specified because of the many unusual properties of this series of alloys.

One good example that comes to mind is a shaft bushing on a rotary selector switch that we make for an instrument manufacturer. This selector is used for switching sound-powered telephone circuits aboard Naval vessels. One of the most important considerations in the choice of 600 alloy for this bushing was its resistance to abrasive action on and against a rubber "O" ring. The acceptance test required a stainless steel shaft riding in the bushing to rotate "dry" for a minimum of 50,000 cycles consisting of 360° rotation clockwise followed by a 360° rotation counter-clockwise. The "O" ring must still form a watertight seal at the end of the test. Our 602 alloy was the only one of several materials tested that met the specs. That was pretty good evidence in itself of resistance to abrasion, but, in addition, this customer also found that the use of 602 eliminated the headaches they previously had with seizing and galling.

The pounding action caused by the indexing mechanism attached to the shaft used to give them no end of seizing troubles. The chief product engineer is extremely happy about the way our alloy is performing. Mention was also made of the fact that the corrosion resistance of 602 was mighty impressive. In this application, the alloy passed the 200-hour Navy salt spray test with flying colors.

So, big or small, it seems that there is no end of applications for 600 series alloys. We even have parts working in a machine that slices frankfurters as well as gears in fishing reels. So, it seems that 600 runs the gamut from "red hots to reels". Well, it looks like the end of the page is here again, so I'll close for now. However, if you have any problems or questions about non-ferrous alloys or you're having trouble getting desired performance from a part, why not drop me a line here in Port Huron, and possibly I can be of some service. Send a part print along if you like, and we'll be glad to make proper recommendations.

Thanks again for your time.

Which of these production savings do you need most . . . . RIGHT NOW?

Believe it or not, *all of these savings were realized on the same operation,* when an armament manufacturer "threw away the book" to replace milling, traditional in the small arms industry, with *broaching.*

What's more, as this operation is further "shaken out," production is expected to reach 75 pieces per hour on the intricately contoured part, which is broached from a rough, flame-cut billet of Rockwell C-25 to C-30 hardness. Projected production from this one Detroit 25-ton, 90" stroke Dual Ram Broaching Machine will then equal, in one 8-hour work day, what was produced in *fifteen* work days on *twelve* milling machines!

Since most parts are suitable for broaching, or can be adapted to this cost-cutting machining process, you can't afford to stick with methods that may have nothing more to recommend their use than "tradition." And you can't find a better source for broach engineering, machines and tooling than Detroit Broach & Machine Company. Ask us for recommendations . . . soon.

DETROIT BROACH & MACHINE COMPANY

Dept. H5 • ROCHESTER, MICHIGAN

not an indictment. It points up the importance of the "little things"—and the tremendous opportunities that lie at every plant's front door.

We're half gone already

Speaking of atoms, and of other potentially hazardous materials, we've developed a new version of an old "numbers game."

Remember the demonstration of illogical logic which starts with the total population of the United States, and, by subtracting all those unable, or ineligible to work, ends up with a total work force of one—or perhaps two? (You and I, of course.)

We've been making a similar calculation of life expectancy. Taking the "normal" life span of 70 years, and then subtracting: Five years for the effects of atomic fallout from bomb tests, five years for cancer caused by smoking, five years for the effects of air pollution, and ten years for heart disease and other debilitating effects of "the executive life."

That brings us down to 45.

As we were saying, we're half gone already.

(The trick in both cases, of course, is double counting. Many people are unable to work for several reasons. A soldier under 21 who was in the hospital would be counted three times—too young to work, too ill to work, and out of the civilian work force. Likewise, the effects of health hazards would work in parallel, not in series.)

Modern industrial life does have its hazards. But there is no cause for panic.

As William A. McAdams, General Electric's consultant on radiation protection, put it recently, "There is no need for anyone to fear radiation, but we all must have a healthy respect for it." That certainly applies to the other dangers as well.

How is your follow-through?

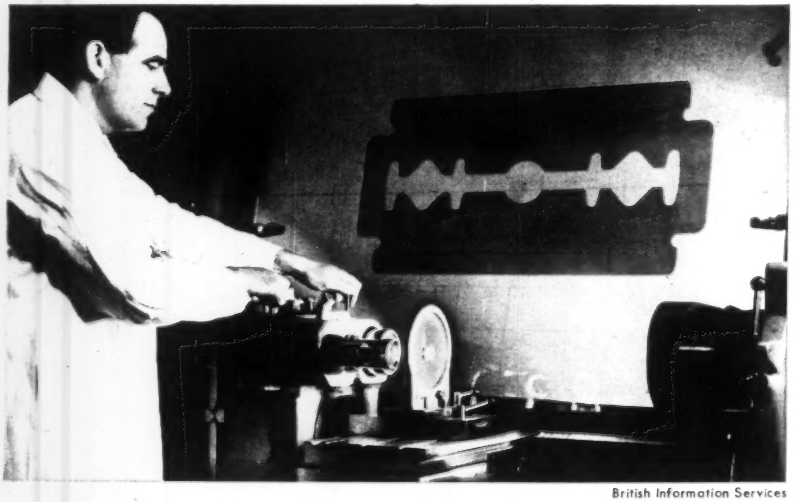
Why do so many companies spend so much time and money promoting their products and so little answering the inquiries that these efforts bring?

Not long ago, for instance, we referred a big—and promising—inquiry to a supplier; and found, three weeks later, that the inquiry letter had not even been acknowledged. Why? The marketing manager was "too busy."

As a consumer, too, we've found many companies that spent a lot of money courting requests for booklets and brochures—and then never bothered to follow up.

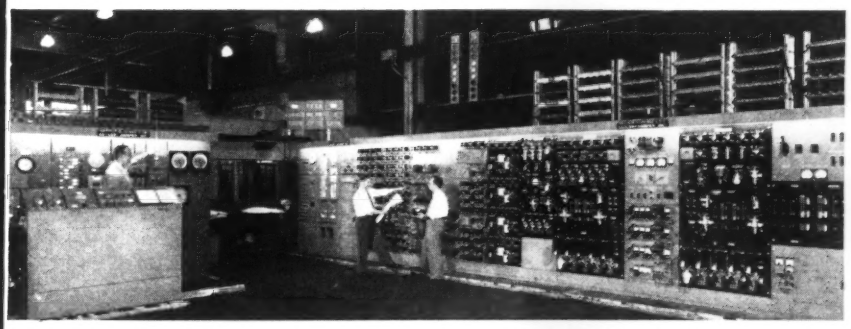
How different the response of a spice company which answers requests for a recipe booklet with a pleasant letter listing local distributors. Or the oil company which follows up requests for a road map with several mailings spaced a month apart.

Britain builds it bigger



British Information Services

King-sized optical comparator, claimed to be the largest of its kind, is used by British firm to check razor edges. This blade is magnified 20 times; but the manufacturer, Optical Measuring Tools, Maidenhead, England, says the unit can go up to 100-power.



Closer control of blast furnace operation is provided by this McKee-Cutler-Hammer panel board system which guides unloading, measurement, transportation, charging furnace mix.

New look for the steel industry

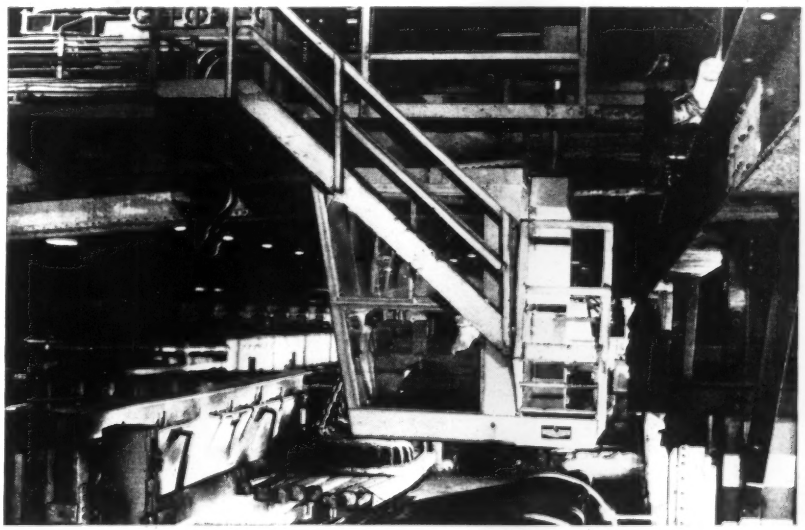
Changes in steelmaking, taking place right now, provide a fine demonstration of how new technical developments can turn hard-to-control, often dangerous, manual operations into much safer, more efficient jobs.

For instance, punched data cards, prepared in advance, are making it possible for steel mill operators to control rolling speed, number of passes, and so on, in much the same way as can now be done for machine tools (see May 1956, page 43).

New control panels make it possible to coordinate and speed a whole series of operations. The blast furnace system pictured above, developed by Cutler-Hammer, Inc., and Arthur G. McKee & Co., monitors every step from ore unloading to furnace changing with just three simplified panel boards.

For those jobs where operators are still needed at close range, a good deal is being done to increase both safety and comfort. Air-conditioned crane cabs, for instance, once seemed like needless frills. But Timken Roller Bearing Company, which is now completing a long-term conversion program (see photograph, below) reports that air-conditioning not only makes the operator safer and more comfortable, it also makes him a lot more efficient. That's reason enough for taking advantage of a new idea.

Note: For news of steel alloys see page 88.



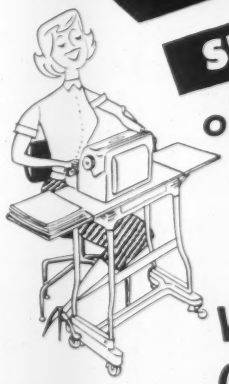
Better visibility is one of many advantages that come with air-conditioned crane cabs, Timken Roller Bearing Company reports. It now has fourteen such units in operation.

OPERATION QUIET!

SILENT WHILE BEING MOVED

LUXCO
Typewriter & Business Machine Stands

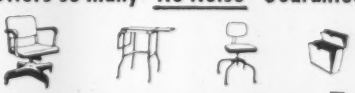
SILENT DURING OPERATION



Why so QUIET?

✓SILENT STEEL TOP *is undercoated.*
✓Retainers, guide bars and feet are cushioned.
✓Casters and feet of soft rubber.

Only LUXCO Stands
Offers so many "No Noise" Guarantees



A Complete Line of Stands, Steel Chairs and Stools and a DeLuxe Personal File.

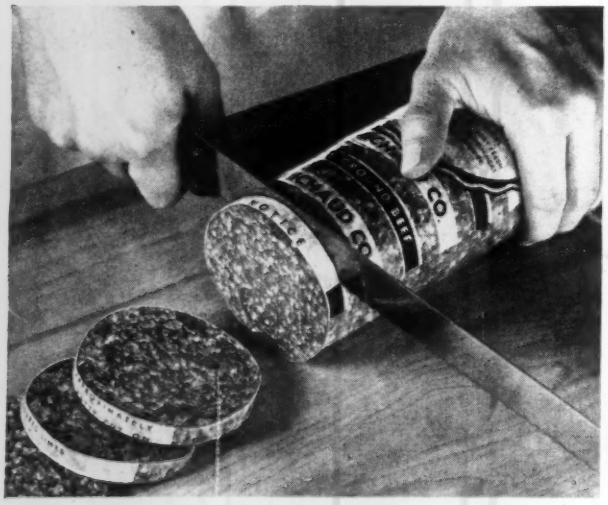
BADGER inc.
LA CROSSE, WIS.
Export Department, 25 Beaver St., New York 4, N.Y.

With the great variety of BAKELITE Plastics

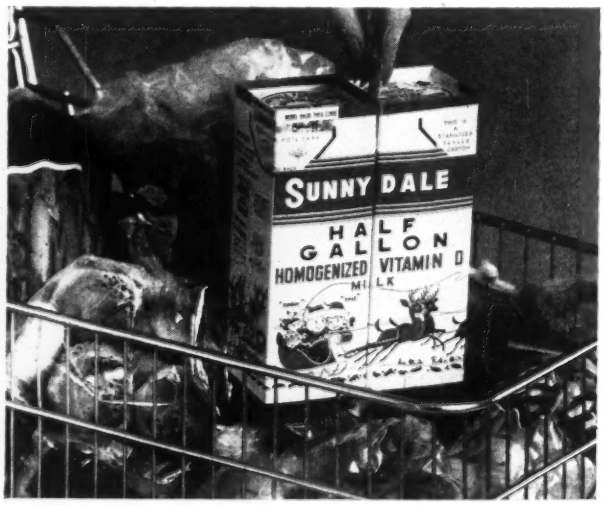
There's always something

Brilliant gem-colored tumblers made of BAKELITE C-11 Plastic provided a double sales punch for Sealtest cottage cheese promotion. In a range of colors, the tumblers, filled with cheese, dominated counters in eye attraction. And, because they are designed to be re-used for serving beverages (the lid becomes a coaster) they please the practical purchaser. Virtually unbreakable, and very resistant to chemicals, C-11 Plastic is ideal for beautifully colored cabinets for portable radios, and other products where intricate detail in molding, dimensional stability, and non-staining are also "musts."

Taking "the bite" out of acids, this film drum-liner made of BAKELITE Brand Polyethylene offers many impressive advantages according to the user. "It is durable, chemical resistant, easy to work with, requires no attention or pre-shipping inspection, has excellent storage stability, is tough and flexible, protects contents from being contaminated by corrosion of the container, and, above all, assures safe delivery." Entire drums molded of BAKELITE Polyethylene possess similar advantages, with a plus in light weight for savings in shipping costs.



"Ground beef keeps better" in a film bag made of BAKELITE Polyethylene, reports this portion packer. "Exposure is the big problem in keeping all meats, particularly chopped meat. Polyethylene film keeps the juices *in* during freezing... and a marked increase in sales testifies to the customer reaction." (Note, also, how the printed package marks off uniform portions.) Longer shelf life, with fresher and truer taste and flavor, are provided for practically all kinds of fruit, meats, produce and processed foods by packaging in polyethylene . . . with equal benefits for other products, from hardware to sweaters.



To protect the contents, a coating based on BAKELITE Brand Vinyl Resins seals the paperboard carton, helps maintain freshness and unimpaired flavor longer. In many other ways, coatings based on BAKELITE Resins provide superior protection . . . on paper, film and foil for packages . . . as paints for masonry, metal, and wood . . . on fabrics for wall coverings and upholstery. Newest of all are quick-drying, interior wall paints that provide a new high in hiding power, smooth leveling, and washability within hours.

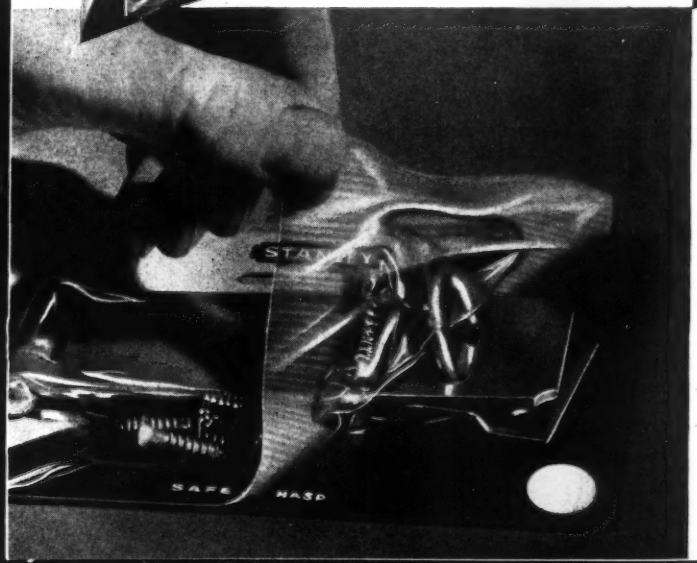
new in packaging

In shapes, colors, finishes . . .
in new materials, new methods
. . . in cost savings, time savings—in
doing a job better in any of many ways.

Look for the new, the unique, the better way to package, and you find BAKELITE Brand Plastics leading a parade of versatile, job-proved materials.

BAKELITE vinyls, styrenes, polyethylenes, high-impact styrenes, epoxies, silicones, polyesters can provide exciting packaging ideas for your products. For information on any of the applications shown here write Dept. XL-42.

Unusual strength, brilliant clarity make KRENE Cast Vinyl Film a natural for "skin packaging." Drawn tight by vacuum, the sparkling film clings snugly to the outlines of even the most irregularly shaped products . . . holds them firmly to their mounting, protects them from moisture and tarnishing, and enhances the eye appeal of the sales message. Write for a sample of this tough, clear film, and more ideas on how to profit with it.



First
in the world
of plastics . . .

BAKELITE BRAND PLASTICS

BAKELITE COMPANY
Division of Union Carbide Corporation UCC
30 East 42nd Street, New York 17, N. Y.

The terms BAKELITE, KRENE and the Trefoil Symbol are registered trade-marks of UCC.

"Here's a hot one for the slitters

60,000 lbs. of slit coils . . . delivered early tomorrow!"

REPORT TO MANAGEMENT:

An actual example of how Ryerson is geared to meet emergencies on steel of every kind.

It was ten after five. The phone rang and a steel buyer 80 miles away said: "I've simply got to have 60,000 lbs. of slit coils first thing in the morning."

Impossible?

Not at Ryerson. This kind of service is what Ryerson customers have learned to count on when emergencies arise.

The needed steel was on hand in Ryerson stocks. Unequalled slitting equipment was put to work. And during the night two different gauges of steel coils were slit to meet two size requirements. Early next morning the steel was delivered *as promised* . . . 80 miles away.

You don't have to wait for an emergency to appreciate Ryerson service. Our stocks and processing facilities enable us to meet practically every demand for steel—no matter what the shape, size, quantity or time requirement.

In addition, you can always depend on Ryerson for steel of high uniform quality.

So call your nearby Ryerson plant for steel or help on steel problems with the assurance of close personal attention by specialists who make your problems their own.

In stock: Carbon, alloy and stainless steel—bars, structural, plates, sheet and strip, tubing, re-bars—industrial plastics, machinery & tools, etc.

RYERSON STEEL

JOSEPH T. RYERSON & SON, INC. PLANTS AT: NEW YORK • BOSTON • WALLINGFORD, CONN. • PHILADELPHIA • CHARLOTTE • CINCINNATI CLEVELAND • DETROIT • PITTSBURGH • BUFFALO • CHICAGO • MILWAUKEE • ST. LOUIS • LOS ANGELES • SAN FRANCISCO • SPOKANE • SEATTLE

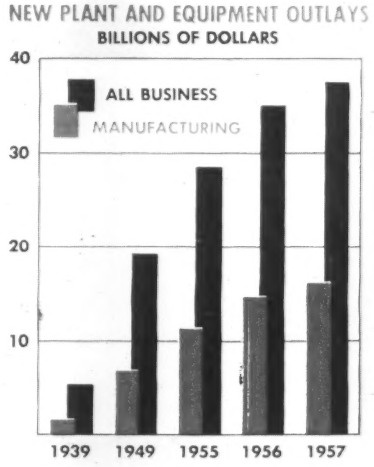
The 1957 sales estimates are based on the expected gains over 1956 amounting to 4 per cent for retailers, 3 per cent for wholesalers, and 8 per cent for manufacturers, reported in a recent Commerce Department-SEC survey. This implies a slight (1 or 2 per cent) expansion over the high sales levels sustained in the past two months.

THE TREND OF BUSINESS

A NEW RESPECT for the dollar appears to have replaced the free-spending spirit that characterized so many of the postwar years. The pace of business in the early months of 1957 apparently slackened just enough to encourage ever more careful attention to the problems of costs and prices, but not enough to panic business sentiment into a buying paralysis.

It was the consensus among business men that 1957 might take its place in history as still another peak year for sales volume. Interviewed in January and February in connection with a survey conducted jointly by the Department of Commerce and the Securities Exchange Commission, business men were optimistic about their prospective sales, and were planning to boost their outlays for new plant and equipment 6 or 7 per cent higher than in 1956. If they follow through with their plans, capital outlays may rise to $37.4 billion, topping last year's peak by a comfortable margin, although the year-to-year rise is much less impressive than the 22 per cent increase from 1955 to 1956 (chart adjacent).

The rise in projected plant and equipment expenditures is far from uniform throughout industry. There are such startling variations as an almost 100 per cent increase in outlays planned by nonferrous metals manufacturers, in contrast with declines of about 25 per cent expected by the automobile companies and 20 per cent by textile manufacturers.



More than half of this year's capital outlays will be spent for expansion; 46 per cent for replacement and modernization.

For such important basic industries as steel, non-automotive transportation equipment, non-electrical machinery, and chemicals, spending for new plant and equipment is expected to range from 25 to 30 per cent higher than in 1956.

Production rides at anchor

While steel production in March ebbed away from the peak rates sustained earlier, and automobile production sagged disappointingly, by mid-April there were some signs that Spring might turn the consumers' fancy to thoughts of the open road. Indecisive, but hopeful, was the upsurge in automobile sales in the last ten days of March, lifting volume for the month above the half-million mark for the first time since last June.

A little less sanguine about their prospects than they were earlier in the year, car dealers were slow in congratulating themselves on the sales rise. A sharp and sustained upturn in automobile sales was thought unlikely by some industry observers, who advanced the view that seasonal patterns in automobile sales might be giving way to more uniform year-

FACTS EVERY BUSINESS MAN SHOULD KNOW ABOUT PHOTOCOPY MACHINES

As basic to office efficiency as typewriter or telephone, say 9 out of 10 who use them — but be sure you know what you're getting before you buy.

What a photocopier is, what it does

Since the introduction of photocopiers just a few years ago, their uses have grown phenomenally beyond the mere making of photo-exact duplicates in a few limited business fields. Today photocopy equipment is recognized by users in *every* type of business as an essential time, money, and labor-saver of amazing flexibility. And here are a few reasons why:

At a time when good clerical help is high-priced and hard to get, photocopy machines have reduced typing time substantially for many firms. They have helped large and small employers attract and retain a higher type of personnel by eliminating the tedious copying work that comprises *two-thirds* of all typing in many offices. Time-consuming checking of copies has been done away with and yet no errors can occur. Filing and dictation have been cut down, too.

A good photocopy machine is a simple, compact unit that anyone can operate. It will reproduce anything from correspondence to pictures, quickly and at trifling cost. . . . Below you'll read many ways that such machines are paying profits to hundreds of users who — just months or weeks ago — were unaware of what photocopy equipment could do in their specific business or profession. Many who bought their first photocopy machine as a "convenience" of limited use have since bought several more and call them "indispensable."

What can a photocopier do for *you*? The *right one* — very definitely — will pay you dividends if you make as few as five copies of *anything* a day!

All photocopiers are not alike

Because they are relatively new and because they all "make copies," it is easy to overlook the very important differences in photocopy machines. In fact, true photocopiers — which *transfer* the image photographically — are often confused with copy-makers using heat or other non-photographic means of duplication, and which fail to pick up satisfactorily such common things as ordinary writing inks and spirit duplication. Such machines, morever, are not sensitive to certain colors. A true photocopier, conversely, will copy *anything*. And the copies it makes are permanent.

But even true photocopiers differ greatly. For example, since they all use light, all have an electric cord. That doesn't mean, however, that any machine that "plugs in" is automatic. Some must be manually operated . . . but even the lowest-priced Cormac is *fully motorized.*

A second big difference is this: with some photocopiers the developing liquid is exposed to contact with the operator. With a Cormac the fluid is completely *inside*. It cannot create a mess. It cannot contact the operator while the Cormac's in use. And remember, a photographic *developer* is essential to photographic clarity and essential for the elimination of copying blind spots. That's why true photocopiers like the Cormac can give you clear, sharp reproductions from any original: pencil, crayon, spirit duplication, rubber stamp, printing or writing inks of any color.

Another important distinction: Some photocopiers must be operated under special light conditions, but there's no need for out-of-the-way locations with a Cormac. Use it in *any* light, wherever it suits your convenience!

In a stringent test of all makes of photocopiers which a large office equipment manufacturer conducted in his own engineering laboratory, each machine was graded on every individual feature—and Cormac photocopiers came out "first."

There IS a difference in photocopy machines. The difference is so distinctly in Cormac's favor that every Cormac photocopier is Guaranteed For Life.

A Cormac will save time in these common every-day situations

★ A letter or memo requires a brief, fast answer. Don't dictate — just jot your reply in the margin and send a Cormac copy.

Cormac NATION-WIDE SALES & SERVICE

Cormac's coast-to-coast network of independent dealers is the largest in the photocopy field —your assurance of continuing satisfaction.

★ A single communication touches on several subjects requiring immediate separate attention of different departments or individuals. Make Cormac copies for all the parties involved.

★ You require orders, invoices or other papers in more copies than are supplied. Don't call or wait for the needed duplicates or triplicates . . . make your own on the spot with Cormac.

★ You need copies of confidential papers that cannot leave your office. Copy them in private on a Cormac. "Even an executive can run it."

★ Outside copying service can't give you copies fast enough . . . perhaps you need several Cormacs in various departments.

★ You can't get enough legible carbons in one typing. Make additional copies on Cormac. They'll all be sharp and clean.

★ You need copies of diagrams, graphs, or sketches which a typist can't duplicate. Cormac can!

★ Claims and complaints arise. Quickly restore good will by furnishing Cormac copies of receipts, checks, other evidence.

★ Magazine or newspaper article is of interest to several people. Don't route original — last people on list may see it too late or not at all. Make Cormac copies.

Compare for speed and economy with retyping or photostating

At current stenographic salaries, it costs over 50¢ a page to make a typewritten copy of a simple letter. Complicated work costs even more. On top of that, there's proofreading and correction time.

With a Cormac photocopier, any office boy can do the job in about one-fiftieth the time. Checking is never necessary; photographic accuracy is assured. And total cost is at least 40¢ less a page than retyping, far less than photostating.

As few as ten copies a day pays for a Cormac in 3 months, saves $1580 a year.

With a Cormac, what used to be an all-day retyping job gets done in 20 minutes. Put another way, one Cormac can equal the combined copying output of 27 girls typing at 80 words a minute.

These are just a few of the economic facts and figures that explain how Cormac photocopiers are helping business men to offset the shortage of typing and clerical personnel, now estimated at over 600,000!

How specific businesses and professions are using Cormac machines

Below is a partial index to the uses of Cormac photocopiers in specific fields. It may suggest similar time and money-saving applications in your own. For more complete information, ask your Cormac dealer for the Application Check List covering your business or profession. Check Lists are available for all of the following occupations and many others.

ATTORNEYS & LEGAL DEPARTMENTS—Abstracts • Deeds • Patent, trademark, and copyright registrations, including drawings • Court exhibits • Law book excerpts • Handwritten notes • Medical and psychiatric reports • Testimony transcripts.

ACCOUNTANTS — Account ledger cards • Accounts payable and receivable • Audit reports • Checks • Invoices and statements • Delinquent account records • Financial and operating statements.

SCHOOLS AND COLLEGES — Transcripts of records • Administrative papers • Research data • Excerpts from books • Charts • Library research • Medical papers • Musical arrangements • Registration data.

ASSOCIATIONS, UNIONS, INSTITUTIONS — Applications • Budgets • Case histories • Complaints • Congressional reports • Claims • Dues receipts • Legislative proposals • Minutes.

HOSPITALS — Accident reports • Autopsy reports • Bills • Blood tests • Cardiograms • Case histories • X-rays • Nurse's records • Insurance reports.

REAL ESTATE — Abstracts • Appraisals • Bids • Blueprints • Building permits • Contracts • Court records • Deeds • Floor plans • Listings • Maps • Surveys • Tax records • Titles and searches.

SALES DEPARTMENTS — Commission statements • Competitive literature • Expense sheets • Sales reports • Directory lists • Marketing statistics • Salesmen's call reports • Territorial maps • Testimonials • Letters of inquiry.

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There's the compact Cormac "Scout," a portable photocopier ideal for field work or the smaller office . . .

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And there are still other Cormac models — including one that fits *your* purpose best. Whichever Cormac you choose, it takes just two easy steps to make exact black-and-white facsimiles . . . in 20 to 30 seconds. All Cormac machines have this in common, too: They're quality manufactured in the United States and Lifetime Guaranteed *in writing*, a guarantee honored by Cormac dealers in all 48 states.

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Even the budget-minded one-man office can afford the "big company" convenience of a motorized photocopier . . .

The Corvette will repay its cost many times, save hours on retyping and dictation, of waiting for copies of letters, and other papers you handle every day.

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Let your Cormac dealer show you how the Cormac Corvette will pay its way and pay a profit on your work, right in *your* own office. Mail coupon to arrange a demonstration at your convenience.

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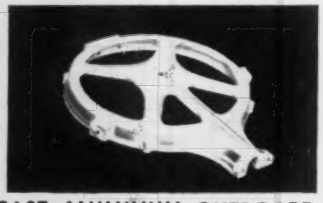
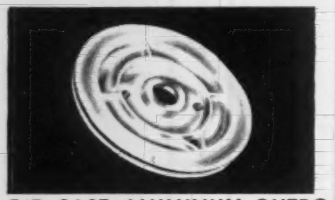
ALUMINUM DIE CASTINGS

for OUTBOARD MOTORS —Important Factors In Their Increasing Popularity



DIE CAST ALUMINUM OUTBOARD MOTOR STARTER HOUSING



DIE CAST ALUMINUM OUTBOARD MOTOR STARTER PULLEY

Literally, 101 applications are found for the use of aluminum die castings—ranging from the starter on top, down to the propeller — on today's dependable lightweight outboard motors. Unquestionably the use of aluminum die castings has played a major role in making practical the increasing use and enjoyment of outboard motors by millions of Americans. Their advantages are many: great savings in weight, corrosion resistance and minimum of machining required for finishing.

Note: in the photographs above, the inclusion of mounting bosses in the castings which reduces assembling costs. The starter pulley, by LITEMETAL, shown above, includes the addition of brass inserts to afford greater wear resistance. Why not consult our designers . . . whatever your field of manufacture.

Let's Talk it Over . . .

LITEMETAL DICAST, INC. is an organization of specialists—men thoroughly experienced in the casting and machining of magnesium and aluminum alloys. Our equipment includes big machines for big jobs—little machines for little jobs . . . the right sizes and types of the most modern die casting equipment for producing parts from the size of a button to large cable spools. Complete facilities for secondary operations are also available.

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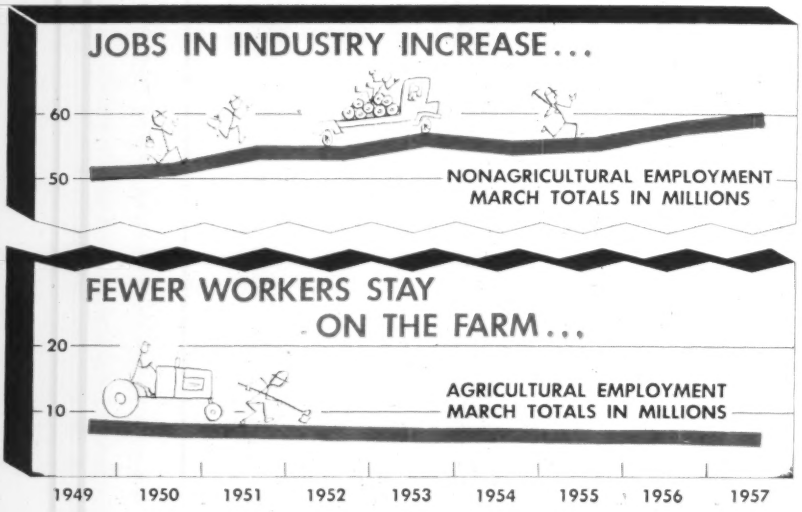


Increased hiring by the Government and the construction and service industries offset a decline in factory employment, boosting the number of nonfarm jobholders to a new record level for the month. Farm employment remained moderately below a year ago.

round buying. But this was small comfort to some producers of the less popular makes, who were curtailing output in the hope of keeping slow-moving stocks within manageable bounds.

Automobile production in the second quarter of this year is scheduled to drop about 5 per cent below the first quarter rate, although it will remain almost 20 per cent higher than a year ago.

Steel production fell below a year ago in March, and the decline from last year widened in early April. Still, steel operations were maintained above 90 per cent of capacity, an agreeable level for the manufacturers. In prewar years, operations at 85 per cent of capacity were considered very satisfactory.

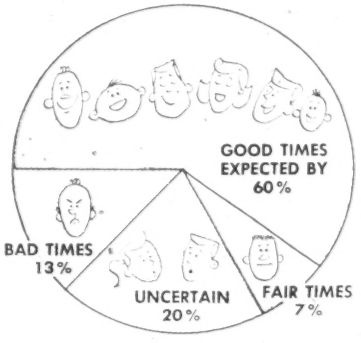
While petroleum production fluctuated somewhat in March and early April, output was held from 6 to 9 per cent above a year ago. Stocks of crude oil were reduced from last year's burdensome levels. Favorable gains from a year ago were maintained in the consumption of electric power throughout the country.

Easter trade gains

None of the spunk was wrung out of retail trade in March and early April, although the year-to-year comparisons for some weeks looked peculiar because of the shift in the occurrence of Easter. Retailers generally expected to ring up gains ranging from 3 to 7 per cent in this year's Easter trade as compared with last. Rains in the East, snowstorms in the West, and tornadoes in the South and Southwest kept some shoppers indoors in late March and early April, but trade picked up noticeably as soon as the skies cleared.

The response to Easter apparel promotions was enthusiastic as women shoppers crowded the stores in search of Spring coats, dresses, and millinery. While there was less bustle around men's stores, sales were maintained well above last year's level.

HOW CONSUMERS VIEW THE YEAR AHEAD



100%

Consumers plan to spend more in 1957 for both new and used cars, furniture, and appliances than in 1956, although their appetite for new homes seems a bit faded.

A few days here and there of mild, sunny weather whetted consumers interest in outdoor furniture, hardware, and gardening equipment, helping to offset the loss in volume in major appliances and television sets. Consumers' willingness and ability to buy reflected the continuation of extraordinarily high employment and income levels, coupled with an unruffled confidence in the future.

Employment, incomes, at new peak

Nothwithstanding the lull in industrial production, employment in March rose to a new all-time high for the month. The expansion in payrolls boosted personal income to a new peak. At an annual rate close to $337 billion in February, personal income surpassed that in January and was about 7 per cent higher than a year ago. Even after allowance for tax payments at the rate of more than $40 billion and higher price levels than last year, consumers could notice some improvement in their financial positions.

Consumers confident

In evaluating their own financial situations in the early part of 1957, the consumers interviewed in the twelfth annual Survey of Consumer Finances responded more favorably than in most recent years. The Survey was conducted in January and

BUSINESS SIGNPOSTS

1939 Average	1947 Average	Selected WEEKLY Indicators†	Latest Week	Previous Week	Year Ago
102	163	**STEEL INGOT PRODUCTION** Ten Thousand Tons (a)	231	231	247
25	49	**ELECTRIC POWER OUTPUT** Ten Million KW Hours (b)	117	117	109
76	121	**BITUMINOUS COAL MINED** Hundred Thousand Tons (c)	99	83	99
69	92	**AUTOMOBILE PRODUCTION** Thousand Cars and Trucks (d)	143	149	153
35	98	**DEPARTMENT STORE SALES** Index 1947–1949 = 100 (e)	122	113	114
5	13	**BANK CLEARINGS** Hundred Million Dollars (f)	224	206	231
284	67	**BUSINESS FAILURES** Number of Failures (f)	302	308	252

1939 Average	1947 Average	Selected MONTHLY Indicators‡	Latest Month	Previous Month	Year Ago
58	100	**INDUSTRIAL PRODUCTION** Index 1947–1949 = 100 (e)	148	147	143
58	95	**NONFARM COMMODITY PRICES** Index 1947–1949 = 100 (g)	125.4	125.5	121.0
37	100	**FARM COMMODITY PRICES** Index 1947–1949 = 100 (g)	88.8	88.8	86.6
59.4	95.5	**CONSUMERS' PRICE INDEX** Index 1947–1949 = 100 (g)	119.0	118.7	114.7
3.5	10.0	**RETAIL SALES** Billions of Dollars (h)	15.8	14.2	15.9
5.4	15.6	**MANUFACTURERS' SALES** Billions of Dollars (h)	27.9	28.9	26.5
45.8	58.0	**EMPLOYMENT** Millions of Persons (h)	63.9	63.2	63.1
72.9	190.5	**PERSONAL INCOME** Billions of Dollars, seasonally adjusted annual rate (h)	336.7	335.0	317.1
103	257	**BUILDING PERMIT VALUES** Millions of Dollars (f)	544.0	433.7	503.1

SOURCES: (a) Amer. Iron & Steel Inst.; (b) Edison Elect. Inst.; (c) Bureau of Mines; (d) *Automotive News*; (e) Federal Reserve Board; (f) Dun & Bradstreet, Inc.; (g) Bureau of Labor Statistics; (h) Department of Commerce.

†WEEKLY INDICATORS: Steel data for the fourth week of April; coal and sales for the second week; all others for third week.

‡MONTHLY INDICATORS: Manufacturers' sales data for February 1957; all others for March 1957.

"SO THAT'S WHY

our labor turn-over's so low!"

"Before we had our Wheelabrator Dustube® Collector, I never would have believed that dust control could mean so much to our personnel department. We may have put it in to salvage material we were wasting, but now that we have it, I think we're saving as much money on training new men. Production's a lot happier, too, because they keep their experienced men, now that turnover has dropped 'way down. This Dustube Collector would pay for itself even if we couldn't re-use the material it collects."

For details on Wheelabrator Dustube Collector principles and savings, write for Catalog 372-C

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WHEELABRATOR®
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MORE CASH . . . as long as you need it . . .

WITH the present condition of the money market, three features of COMMERCIAL CREDIT'S Commercial Financing Plan become increasingly important:

1. Cash is available as long as needed. It is not subject to calls or renewals.
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Experience has proven this method usually provides more cash than other sources. Getting started is simple, whether the need is for $25,000 or millions. There is no interference with management and usually cash is ready for use a few days after first contact. The one reasonable charge is tax deductible.

For additional facts, contact the nearest COMMERCIAL CREDIT CORPORATION office below. Just say "Send me more information about the plan described in Dun's Review & Modern Industry."

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Capital and Surplus over $200,000,000

COMMERCIAL CREDIT COMPANY'S subsidiaries, during the past year, advanced over one billion dollars to manufacturers and wholesalers to supplement their cash working capital. The total volume of its finance subsidiaries amounted to over three and one-half billion dollars.

February by the Federal Reserve Board in cooperation with the Survey Research Center of the University of Michigan. Some 40 per cent of those questioned thought that they were better off than a year ago, and an additional 35 per cent felt at least as secure as last year. While 75 per cent of the consumers thought they would be making as much, or more, a year from now, only 7 per cent felt sure they would be making less (19 per cent couldn't decide).

There was some agreement with the optimistic view among employers scattered across the country. It was expected in 90 per cent of the 149 major employment centers that additional workers would be added to payrolls between March and May, according to reports from the Bureau of Employment Security. The usual seasonal expansion in the construction, service, food manufacturing, and lumber industries is expected to increase the number of job opportunities. These gains are expected to offset seasonal declines in the apparel, textiles, shoe manufacturing, and tobacco industries.

Construction outlays rise

While the total volume of new construction put in place in the first three months of 1957 was the largest for any first quarter on record, home building was still in distress. Outlays for all kinds of new construction amounted to $9.2 billion in the first quarter, some 4 per cent higher than a year ago. But the construction of new privately financed homes failed to share the general rise, dropping 10 per cent below last year's total. Dwelling units were built in March at the rate of 880,000 a year, the lowest rate in over eight years.

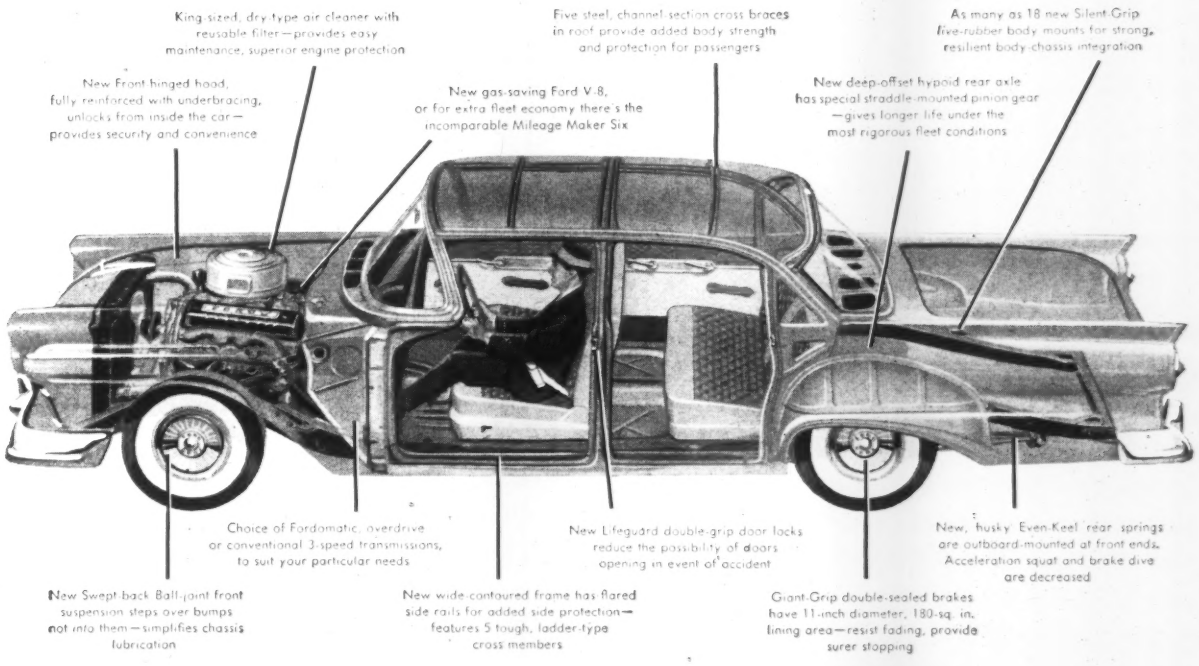
In 1956, some 1,118,100 housing units were started, 16 per cent fewer than in 1955. That there will be a continued slump in home building is implied in the level of applications for Federal Housing Administration mortgage insurance on proposed houses; these in March were 35 per cent fewer than a year ago.

With new families formed at the rate of about 900,000 a year, it looks very much as if there will not be enough new dwellings started this year to house these additional families, much less replace obsolete homes.

Builders were inclined to blame lenders for this unhappy situation,

Observe the BRAWN beneath FORD'S beauty

You demand style and comfort for your fleet cars . . . and the '57 FORD has these aplenty! But you require strength and dependability, too . . . so let's look at some of the important extras that FORD offers in the "BRAWN department."


King-sized, dry-type air cleaner with reusable filter—provides easy maintenance, superior engine protection
Five steel, channel-section cross braces in roof provide added body strength and protection for passengers
As many as 18 new Silent-Grip five-rubber body mounts for strong, resilient body-chassis integration
New Front hinged hood, fully reinforced with underbracing, unlocks from inside the car—provides security and convenience
New gas-saving Ford V-8, or for extra fleet economy there's the incomparable Mileage Maker Six
New deep-offset hypoid rear axle has special straddle-mounted pinion gear—gives longer life under the most rigorous fleet conditions
Choice of Fordomatic, overdrive or conventional 3-speed transmissions, to suit your particular needs
New Lifeguard double-grip door locks reduce the possibility of doors opening in event of accident
New, husky Even-Keel rear springs are outboard-mounted at front ends. Acceleration squat and brake dive are decreased
New Swept-back Ball-joint front suspension steps over bumps not into them—simplifies chassis lubrication
New wide-contoured frame has flared side rails for added side protection—features 5 tough, ladder-type cross members
Giant-Grip double-sealed brakes have 11-inch diameter, 180-sq. in. lining area—resist fading, provide surer stopping

FORD FLEETS ARE LOW COST FLEETS

Now-
35,000 tab cards* instantly available!

the New STANDARD Modular
ROL·DEX unit

Records roll to the clerk!
• rolling tray carriages add speed-reduce fatigue •

Maximum capacity—minimum floor space!
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and you use your present records!

3 models to choose from- Sit-Down, Stand-Up or Mobile models to fit your operations

adaptable to 3 or more record sizes-
Standard Models available for 7⅜" x 3¼" (tab), 6" x 4" or 5" x 3" cards.

All Standard Rol-Dex Units are available for shipment direct from stock.

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Rol•Dex Division, Dept. D Jamestown, New York
Please send literature describing new Standard Rol•Dex to:

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claiming that the lack of mortgage money was inhibiting home buying. Whether the blame could be placed on too-high interest rates or too-high home prices was difficult to discover, but there was certainly evidence that some potential home buyers were being priced out of the market.

Industrial building activity held up well in the first quarter of 1957, with expenditures running 20 per cent higher than a year ago. The utilities spent 11 per cent more than last year, while publicly financed construction of all sorts was up by a similar percentage.

Debt repayment prompt

While there has been a noticeable increase in foreclosures on nonfarm real estate in the past ten years at 30,963 in 1956, foreclosures were still less than one-third as numerous as in the years preceding World War II. Considering the extraordinary level of home financing activity in the postwar years, the low level of foreclosures is even more remarkable. The volume of nonfarm home mortgage debt at the end of 1956 was about six times larger than the $17 billion in prewar 1940. Disposable personal income in the same period increased less than four-fold.

Consumers acquired new installment debt at a slower pace in February, while sustaining repayments at a high level. Total consumer credit outstanding, which includes both installment and non-installment debt, edged downward to $40.5 billion at the end of February from the $40.9 billion at the end of January.

Prices mixed

Wholesale commodity prices fluctuated mildly within a very narrow range in March and early April, averaging about 17 per cent higher than in the postwar years 1947–1949, and fractionally above a year ago.

The cost of living was higher in February than it had ever been before. The Bureau of Labor Statistics' index of consumers prices rose to 118.7 (1947–1949=100), a new high, almost 4 per cent above a year ago.

This is a Business Conditions Staff Report, prepared by Lorraine Carson, Business Conditions Editor.

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"Far from being a cost item, our completely modernized offices will repay the investment in equipment in two years."

Smoother work flow with less office "travel", faster filling of customers' orders, file facilities doubled, more business handled by fewer people . . . these are a few specific benefits of its Art Metal installation reported by a prominent men's wear manufacturer*, quoted above. Art Metal's experience in tying together the various operations of office routine with a "streamlined" equipment layout is unequalled. When you combine proper planning with desks, chairs, files and other equipment of the finest quality, resultant savings in office time, labor and space soon repay your entire investment. Look up your local Art Metal representative in the Yellow Pages, or write Art Metal Construction Company, Jamestown 7, New York.

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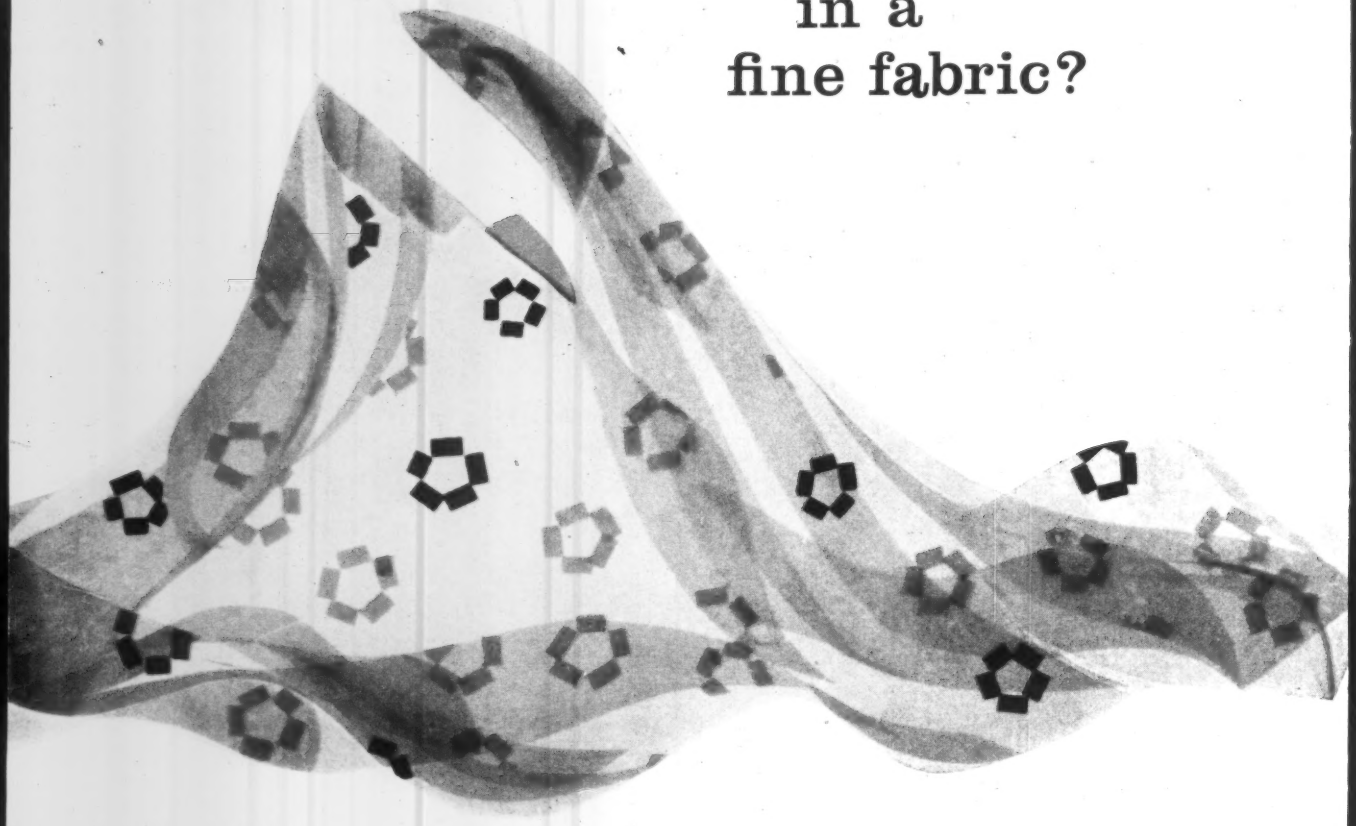

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You won't notice it in the bright pattern of a piece of yard goods or the trim fit of your new suit—but IBM business machines and electronic systems play a vital role in spinning a breathtaking range of new fibers, textures and colors into your life.

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IBM DATA PROCESSING

DATA PROCESSING
ELECTRIC TYPEWRITERS
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BUSINESS FAILURES

CLIMBING 17 per cent in March, business failures reached a postwar high of 1,336. The toll was 14 per cent above a year ago, and for the first time in the postwar period exceeded the 1939 level of 1,322. In fact, more concerns succumbed than in any March since 1933.

In relation to the number of listed enterprises, however, failures occurred at a slower pace than in 1939–1941. DUN'S FAILURE INDEX, which extends the monthly mortality to an annual basis and is adjusted for seasonal variations, recorded 55 casualties for each 10,000 businesses listed in the DUN & BRADSTREET *Reference Book*. Up from 51 in the preceding month, this rate compared with 46 in March last year. But it remained considerably below the 61 for each 10,000 enterprises in 1940 and 1941, and the 72 in 1939.

The liabilities involved in March failures totaled $55.8 million. There were more failures than in February in all size groups. But aggregate losses were not so large as in several preceding months, since the major increases centered in medium-sized casualties. Fewer businesses failed with liabilities higher than $100,000 than in January.

Retailing and construction casualties rose to new postwar highs in March. Milder increases prevailed in wholesale trade and commercial service, where tolls were the heaviest in a year, and in manufacturing, where failures reached a ten-month peak.

While wholesale and service casualties dipped below their 1956 levels, trends in manufacturing were mixed, resulting in a net rise of 7 per cent. In contrast, construction failures climbed 37 per cent above last year, with the toll in general building up twice as sharply as in subcontracting. Retailers suffered 17 per cent more casualties than in 1956; only two lines, apparel and general merchandise, reported lower tolls.

All geographic regions except the New England and East South Central States reported an increase in failures from the previous month and also from the corresponding month of 1956. In fact, postwar records were established in five areas: the Middle and South Atlantic, the East and West North Central, and the West South Central.

FAILURES BY DIVISION OF INDUSTRY

(Current liabilities in millions of dollars)	Number 3 Months 1957	1956	Liabilities 3 Months 1957	1956
MINING, MANUFACTURING	635	635	67.3	47.7
Mining—Coil, Oil, Misc.	21	10	4.8	3.2
Food and Kindred Products	44	58	3.7	3.0
Textile Products, Apparel	149	159	10.1	8.9
Lumber, Lumber Products	120	101	6.6	6.5
Paper, Printing, Publishing	36	27	1.6	0.7
Chemicals, Allied Products	15	11	1.6	2.1
Leather, Leather Products	17	23	2.6	1.3
Stone, Clay, Glass Products	17	6	0.8	0.9
Iron, Steel and Products	32	33	18.9	3.3
Machinery	71	87	7.5	10.2
Transportation Equipment	18	16	1.4	1.4
Miscellaneous	95	104	7.6	6.3
WHOLESALE TRADE	318	336	17.6	14.9
Food and Farm Products	73	75	6.2	2.4
Apparel	15	19	0.8	0.5
Dry Goods	6	12	0.1	0.3
Lumber, Bldg. Mats., Hdwre	32	47	1.5	3.5
Chemicals and Drugs	14	11	0.5	0.2
Motor Vehicles, Equipment	22	17	1.4	0.7
Miscellaneous	156	155	7.1	7.3
RETAIL TRADE	1852	1618	50.5	42.1
Food and Liquor	304	239	6.1	3.4
General Merchandise	83	68	3.7	3.3
Apparel and Accessories	331	330	6.5	7.3
Furniture, Furnishings	278	225	10.0	7.1
Lumber, Bldg. Mats., Hdwre	123	86	4.2	2.7
Automotive Group	200	183	5.2	8.6
Eating, Drinking Places	331	276	8.5	6.0
Drug Stores	43	38	1.6	0.7
Miscellaneous	159	173	4.6	3.1
CONSTRUCTION	562	417	29.5	23.1
General Bldg. Contractors	224	152	17.0	11.3
Building Subcontractors	301	243	9.5	10.3
Other Contractors	37	22	3.0	1.5
COMMERCIAL SERVICE	263	236	10.4	6.9
TOTAL UNITED STATES	3630	3242	175.3	134.7

Liabilities are rounded to the nearest million; they do not necessarily add to totals.

THE FAILURE RECORD

	Mar. 1957	Feb. 1957	Mar. 1956	% Chg.†
DUN'S FAILURE INDEX*				
Unadjusted	58.7	59.3	49.6	+18
Adjusted, seasonally	54.9	51.1	46.4	+18
NUMBER OF FAILURES	1336	1146	1170	+14
NUMBER BY SIZE AND DEBT				
Under $5,000	183	178	184	— 1
$5,000–$25,000	698	539	594	+18
$25,000–$100,000	344	325	303	+14
Over $100,000	111	104	89	+25
NUMBER BY INDUSTRY GROUPS				
Manufacturing	239	199	224	+ 7
Wholesale Trade	121	106	122	— 1
Retail Trade	672	568	572	+17
Construction	205	180	150	+37
Commercial Service	99	93	102	— 3
	(LIABILITIES in thousands)			
CURRENT	$55,833	$65,406	$42,622	+31
TOTAL	56,175	66,200	43,843	+28

*Apparent annual failures for each 10,000 listed enterprises, listed in the DUN & BRADSTREET *Reference Book*.

†Per cent change, March 1957 from March 1956.

BUSINESS FAILURES *include those businesses that ceased operations following assignment or bankruptcy; ceased with loss to creditors after such actions as execution, foreclosure, or attachment; voluntarily withdrew leaving unpaid obligations; were involved in court actions such as receivership, reorganization, or arrangement; or voluntarily compromised with creditors out of court.*

CURRENT LIABILITIES, *as used in The Failure Record, have a special meaning; they include all accounts and notes payable and all obligations, whether in secured form or not, known to be held by banks, officers, affiliated companies, supplying companies, or the Government. They do not include long-term, publicly held obligations. Offsetting assets are not taken into account.*

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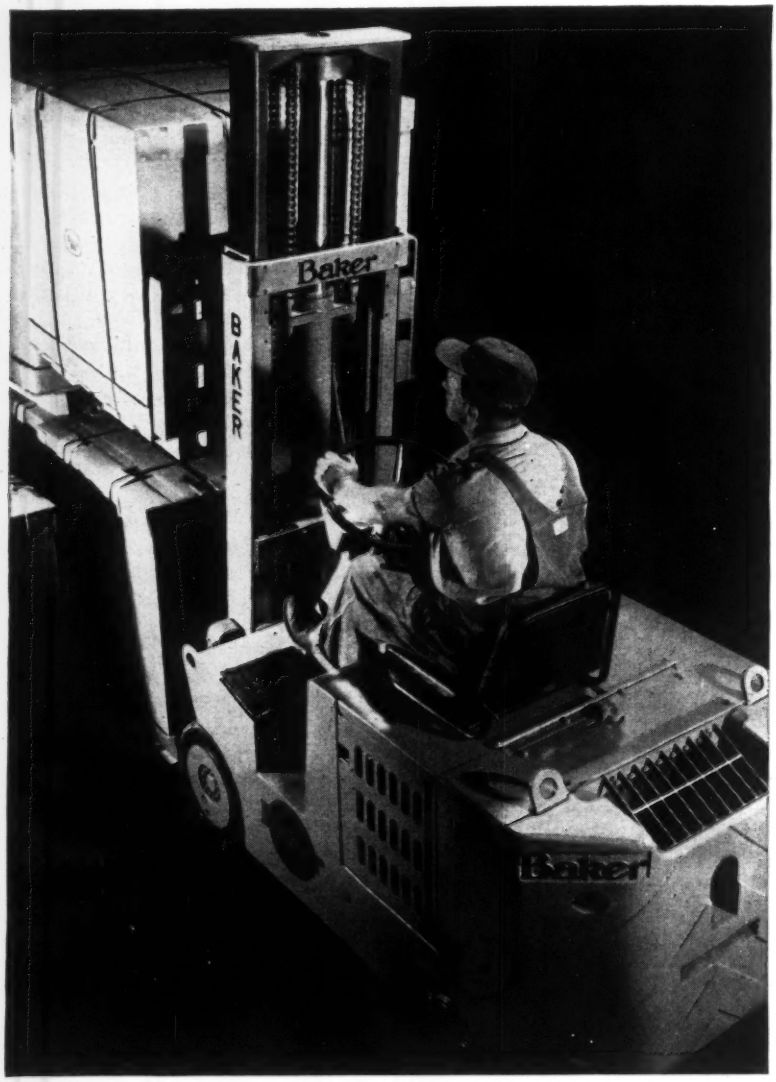

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6G2

Every little merger has a meaning all its own, and the reasons back of larger mergers are often as complex as they are necessary.

In this issue we present three articles as a guide to the successful merger. First, Edward R. Bagley presents the planned approach in which the risk and reward elements are considered in a proper balance; then, Judge Victor R. Hansen looks at the legal aspects of the merger through the searching binoculars of the U.S. Department of Justice; and finally, G. E. Byers, Jr., presents the case history of a merger plan that paid off because of an imaginative definition and a practical application of the word diversification.

PLANNING TO BUY A BUSINESS?

Size alone does not guarantee strength. Here are yardsticks to test the over-all soundness of a company acquisition program.

EDWARD R. BAGLEY

"GEORGE, I had a call this morning from Sam Smith on the Coast. Robson Manufacturing has just acquired the Scimitar business in Los Angeles."

"That gives Robson an assembly plant and warehouse out there. It will put them ahead of us in sales volume."

"Yes. We've got to start some diversifying and fast-growing ourselves or get lost in the shuffle. Let's see if we can get the Board stirred up to take some action at next week's meeting."

Conversations like this have been going on at a surprising rate recently in all segments of U.S. industry. The urge to grow and to diversify by acquiring new business has become almost a mania. Often businesses are being bought impulsively, with a prod from competition and without adequate thinking and planning about the long-term effect of the purchases. Even when deals look good from a financial standpoint, they still can be miserable failures if certain key elements are missing.

An alarming number of otherwise successful companies have been hurt by poor acquisitions. Most bad buys are later covered up as "cost reduction programs" or "consolidations of operations." But there have been an increasing number of businesses in troubles that are plainly merger-born.

Recently a diversified manufacturing company acquired two home appliance lines, and not long after was forced to sell one and discontinue the other. A large consumer products company bought, face-lifted, and resold a cosmetic line at a loss of several million dollars, all within five years. A food products manufacturer bought a home-baking line, and then had to abandon its new advertising program after millions of dollars had gone down the drain.

The direct costs of unwise mergers are alarmingly high. But there are unmeasurable indirect costs that can be equally harmful. Some of these are:

1. *Weakening of parent companies.* If an acquired company soaks up more capital and executive talent than expected, it can knock the props out from under the business it was meant to shore up.

2. *Financing headaches.* If a newly acquired business runs in the red, the parent company is apt to find that the outside capital it needs for other acquisitions or for rescuing the business has become harder and more costly to get.

3. *Shock.* Once burned by a merger failure, top management, directors, and stockholders may be twice shy about launching into the kind of aggressive rebuilding program they ought to follow.

4. *Executive turnover.* The task of attracting and keeping able executives, a difficult one at best, is greatly

complicated by the uncertainties that follow a merger misstep. Outside employment offers look more attractive to key people; their replacements are harder to get.

5. *Loss of public confidence.* The word has a way of getting around. To outsiders who are in close working contact with a company, the internal stress that follows a mistaken merger is readily apparent. Relationships with customers, suppliers, and the general public inevitably weaken.

Acquisitions are neither automatically desirable nor inevitably successful. The wrong acquisitions create problems rather than solve them. And few businesses suffer mistakes more costly or difficult to rectify than the acquisition gone awry.

On the other hand, a sound acquisition can be tremendously valuable to a company. The aim of this article is not to warn managements away from mergers, but to set guideposts for sound acquisition planning.

Why They Buy

First of all, what are the reasons for buying a business? Two of the more common reasons are corporate politics and the emotional drives of executives. Politically, a merger can be a cover-up for poor management. Dazzled by the mirage of always successful mergers around them, some less effective managements have felt it necessary, defensively, to go and do likewise. The action is dramatic and may allay criticism, but only for a while.

Added to the restive stirrings of stockholders and directors in badly managed companies are the ever-present and terrifying aspects of raiders. Raiders are always on the lookout to displace entrenched managements by organizing dissatisfied stockholders. Faced with this threat, harried executives who might otherwise be uninterested in mergers seek shelter by consolidation with a more successful company in hopes of strengthening their stand.

The main emotional cause behind mergers is the natural human urge to build an empire. While more plausible reasons are always given to justify the adventure, this drive, whether conscious or unconscious, is often the real motivation for mergers.

But there are more defensible reasons for acquiring businesses. The three that turn up most often are growth, diversification, and financial considerations.

U.S. gross national product has doubled since 1946. The value of construction contracts awarded has trebled in the same period. Dynamic companies, such as Scott Paper and Collins Radio, have increased profits by 800 to 1,000 per cent or more in ten years.

Inevitably, such growth records become measuring rods and challenges for management. To equal or exceed them, aggressive expansion programs are essential. And one of the fastest ways to grow is to merge.

The need for more plant and more manpower is intensified in expanding companies. Both take precious time to develop, during which a company may be forced to let attractive growth possibilities go by the board. Mergers can help by providing a ready-made organization with experienced management, a trained labor force, a factory, a distribution system. When Chrysler acquired the aircraft and automotive divisions of Briggs Manufacturing in 1953, it got twelve plants manned and equipped to produce needed components.

THE AUTHOR • Edward R. Bagley has been assistant to the vice president in charge of merchandising at McKesson & Robbins and a member of the faculty of the College of Commerce and Administration, Ohio State University. He is now senior associate at Cresap, McCormick and Paget, management consultants, New York. He specializes in diversification work in both industrial and consumer goods industries. He received his B.S. and M.B.A. degrees from the College of Commerce and Administration, Ohio State.

Growth breeds growth. A merger by one company inspires a similar move by a competitor. Or, one good merger may appear to deserve another to continue expansion at a competitive pace. H.K. Porter Company, for instance, appears to be encouraging the operating divisions it has acquired to look for new acquisitions of their own. With an approving nod from top management, Minnesota Mining's Reflective Products Division recently went out and bought Zenith Plastics Company.

Sometimes the aim is just to keep up. Mergers can help here, too, as they did in the case of the couplings of Studebaker with Packard and Nash with Hudson. These companies joined because they knew it would take their combined resources to compete with the Big Three in the auto industry.

Diversification means, simply, spreading the risk. It prompts mergers because mergers are a quick way of accumulating new products, processes, or services and thus offsetting business risks.

What prompts diversification? Declining markets for one thing. Companies in shrinking fields, such as railroad equipment, wholesale groceries, leather, coal mining equipment, and foundry products, have been reaching out to acquire positions in wholly different, growing industries.

Low-profit markets are another cause. Even with continuing demand for an industry's products, markets may become relatively unprofitable. This accounts for the shifts into more profitable fields by such companies as Textron, Borg-Warner, Philco, Elgin National Watch, and Continental Baking.

Then there's the problem of product obsolescence and expiration of patents and licenses. This risk contributed to the merger motivations of Vick Chemical, Chesebrough-Ponds, and B.T. Babbitt.

Diversification can also smooth the profit dips for companies suffering from wide fluctuations in costs or availability of raw materials and supplies, especially in industries dependent on agricultural and other natural raw materials. Acquisitions that have helped reduce this risk have been made by General Foods, Plymouth Cordage, and U.S. Rubber.

Cost Variations

A number of the leading petroleum companies have used diversification successfully to offset loss from variations in costs. Gross margins of nonintegrated petroleum companies have wide seasonal variations. By merging several functions, such as refining, transport, distribution, or retailing, such companies have obtained more stable gross margins and greater return on invested capital.

The simple fact of concentration in a single industry, even if a profitable one, can also compel a company to diversify. That was the reason for mergers by established, growing

companies such as W. R. Grace, Olin-Mathieson Chemical, Continental Can, General Tire, and American Machine and Foundry.

From the treasurer's point of view, mergers can be appealing for a variety of reasons.

- It may simply cost less to get needed personnel, products, plant, or other assets by merger than by building from within.
- It may be less risky to buy an established product than to develop and launch a new one.
- Companies that are on the move merger-wise tend to get favored treatment in equity and debt financing.
- A company that's short on cash can often get it most readily by merging with one that's long on liquidity.
- There are tax advantages in mergers. Textron, for instance, got a tax loss of $30 million or more when it bought American Woolen. Charged against future profits, this tax carry-forward will net Textron stockholders an additional $10 to $15 million. Also, by using funds in excess for acquisitions, a company can avoid having to pay the punitive accumulated earnings tax.

If any of the foregoing reasons for buying a business appear to fit a company's situation, the next step is to pre-test the soundness of its ideas on acquisitions. There are three critical points to be checked: (1) What are the corporate goals? (2) Is the company attaining those goals? (3) Is it prepared to follow a sound acquisition program?

An acquisition program is not an end in itself but a means of reaching corporate goals. The first step in considering acquisitions is to know—and to state clearly—the over-all goals the company is trying to reach. They usually sort best into four categories: type and character of the business; its profitability; its growth; its geographic coverage.

What type and character of business do you want to have? What kinds of products or services? What standards of quality? What kinds of customers? Do you want to be specialized or diversified? Do you want an operating income or a speculative profit?

As to profitability, what rate of return do you want on your invested capital? In an inflationary period, it's well to figure the rate of return likely to be required in the future to replace or improve existing assets. It's also important to consider the rate necessary to sustain dividend payments in the future.

Thirdly, what rate of growth does your company want, measured in terms of profit, earnings per share, net worth, or book value per share? Give special thought to future rate of growth; some industries may grow faster in the future than they have in the past. Here, too, it's important to allow for inflation and to measure growth goals in real terms, not just in dollars.

Finally, what geographic area do you want to cover? It could be a single city or a territory as wide as the world.

The reasons for an acquisition program vary radically, depending on whether the company is attaining its corporate goals or falling short of them. If it is reaching its goals, it should consider the following questions:

- Should we diversify away from the basis of our excellent results to date?
- Would we dilute the strength of our management team by engaging in ventures where our managers may be neophytes?
- Can we develop new products internally to replace old ones instead of taking on entirely new lines?
- Why not expand geographically by setting up new branches rather than by purchase of less aggressive competitors?
- Isn't it more hazardous to spread our risks over new ventures than to concentrate on the business we know?
- Can we maintain the same esprit, originality, and drive that built our business after we've grown by merger?
- Will the merger give us easier access to more capital funds at lower costs even if we dilute our earning power through a costly acquisition?

If the company is falling short of its goals, the following questions would apply to a merger consideration:

- How would a merger remedy the problem?
- Why substitute a dramatic acquisition for improved management of our basic business?
- Would the able new management we might acquire be more successful than we have been in meeting our unrealized goals and maintain the operating results that attracted us?
- If we're not acquiring new man-

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WHEN MERGERS RUN WILD

Something new has been added in the current wave of mergers that is described by the term "conglomerate" acquisition. While Studebaker went from wagons to automobiles, Cluett Peabody from separate collars to shirts with collars, and Sears Roebuck from mail order to mail order plus chain stores, we now find corporations acquiring businesses engaged in radically different types of operation.

There are many bizarre and unique combinations. A manufacturer of asbestos products takes over a company engaged in producing aviation equipment. An anthracite coal mine acquires a manufacturer of men's and boys' underwear. A manufacturer of dyes and dyestuffs takes over a company producing heavy forgings.

The very diversity of operations, calling for skills and experience in every division of the business, would seem to foredoom such ventures to unprecedented problems and result in the eventual sales or liquidation of divisions or subsidiaries.

International Harvester Company threw in the sponge on its extensive line of household appliances, refrigerators, freezers, and air conditioners after several years. The International Telephone and Telegraph Corporation acquired control of the Coolerator Company and then liquidated it after eighteen months "because of continual losses incurred in the operation." A successful corporation engaged in exporting plumbing and construction supplies acquired a business that published medical books in the dietary field, continued it as an unprofitable operation for three years, and then resold it to the specialist who had organized and developed the business.

It would not seem to be an exaggeration to suggest that this wide wave of conglomerate and unbalanced diversification will produce more headaches and indigestion in the years ahead than appear on the surface during a period of unprecedented prosperity.

ROY A. FOULKE

THE ANTITRUST DIVISION LOOKS AT MERGERS

VICTOR R. HANSEN, *Assistant Attorney General, in Charge of the Antitrust Division, U.S. Department of Justice*

To merge or not to merge—what does the law say? The head of the Antitrust Division presents the Government position and appraises pending legislation.

OPPORTUNITIES for economic growth are always of vital concern to business men. The factors affecting these opportunities are varied and complex, many bearing no relationship to the antitrust laws. But in the field of antitrust enforcement, the area of my concern, the function of the Antitrust Division of the Department of Justice is to insure, as best it can, that illegal activities do not stifle competitive enterprise or stunt natural business development.

Violations of the antitrust laws come to our attention in various ways. Sometimes the first indication of possible illegal activities is a complaint from someone who is being injured. During the fiscal year 1956 we received almost 1,200 complaints, some of which have developed or may develop into investigations preliminary to the institution of legal proceedings. While we now have fewer than 100 cases pending, there are nearly three times as many pending investigations. The significance of these figures here is only to suggest that suit is not filed as a result of a complaint without a considerable amount of investigation.

The basic antitrust law is the Sherman Act, enacted in 1890. In Section 1 it prohibits contracts, combinations, and conspiracies in restraint of trade. Over the years judicial decisions have pointed out certain activities that are illegal *per se*—for instance, agreements to fix prices, to allocate customers or territories, to limit production, or to engage in a boycott illegally restraining trade, irrespective of the reasonableness of the prices fixed or the beneficial purposes of the participants. Other types of restraints, which are not illegal *per se*, are not "conclusively presumed" to restrain competition unreasonably. Section 2 of the Sherman Act prohibits conspiracies to monopolize, attempts to monopolize, and monopolization.

The Clayton Act supplements the Sherman Act and, generally speaking, may be described as intended to reach incipient Sherman Act offenses. One of the most important provisions of the Clayton Act is Section 7, prohibiting mergers and acquisitions the effect of which "may be" substantially to lessen competition or to tend to create a monopoly. It will be noted that this language deals with the type of offense covered by the Sherman Act, but reaches conduct that would not offend that Act. In suits under either provision, the effect of defendants' conduct may be a criterion of its illegality; and, though the effect may fall short of that banned by the Sherman Act, the probable effect may be such as to bring it within the Clayton Act. In other words, under the Clayton Act it is not necessary to wait until forbidden results occur.

In 1950 an amendment strengthened Section 7 of the Clayton Act by prohibiting asset acquisitions as well as stock acquisitions. At the same time certain other changes were made in the language of this section. The first case under amended Section 7 was filed in February 1955, and since that date ten other proceedings have been instituted by the Department of Justice. The Federal Trade Commission, which also has jurisdiction to enforce Section 7, has filed a total of 18 complaints. Consent judgments have been entered in four of our cases, leaving seven pending. Some of these involve horizontal mergers, other vertical. The House Report made clear that Congress in-

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THE AUTHOR • President Eisenhower appointed Victor Russell Hansen Assistant Attorney General of the United States, in charge of the Antitrust Division, Department of Justice, in July 1956. Mr. Hansen was admitted to the California Bar in 1928, and to practice before Federal courts in 1929. From 1931 to 1951 he was a partner in the law firm of Hansen & Sweeney, and was appointed a judge of the Superior Court in 1951. He has been a brigadier general in the California National Guard since 1944 and regent of the University of California since 1946, and is the author of *History of the State Guard of California*, *Tort-uous Path of a Fiduciary*, and *Preparation of Condemnation Cases for Trial*.

MERGING WITH SAFETY

G. E. BYERS, JR., *Director of Marketing*
Safety Industries, Inc.

This company lived up to its name in approach to diversification; it took the time to study, got unexpectedly fast payoff.

THE ECONOMISTS have a word for it: "secular" decline. It's what hit the carriage-makers when the early automobiles began to appear on the roads—a long-term downward trend over a period of decades. There may still be temporary upturns in times of general prosperity, but each peak tends to be lower than the last one, each trough deeper.

A company that has started to roll down the secular hill has the best possible reason for diversifying, by merger or otherwise. And if it is fast on its feet, it can slip into new lines of business before the old ones drop too far—as the story of Safety Industries, Inc., shows.

The Safety Car Heating & Lighting Company—an old-time New Haven, Conn., company with progressive ideas—has completed four diversification mergers (or acquisitions) in less than three years, and adopted a new name, "Safety Industries, Inc." Profits in 1956 were nearly double those of 1955, more than double before taxes.

When Safety was founded, in 1887, it entered a new and wide-open field. Railroad cars were lighted by kerosene lamps and cooking was done on wood-burning stoves; thus a wreck was apt to mean as many casualties from burning as from impact. Safety introduced Pintsch gas and largely eliminated the fire danger—hence its name.

Pintsch gas is still used for lighting and cooking in railroad cars in some areas, notably in parts of Canada, for it is more dependable than electricity when a train gets stalled in a snowstorm. But by 1910 it was clear that the market for it was bound to shrink. So Safety turned to electricity, and began producing electrical generating equipment for the railroad industry. Later it developed related products — voltage regulators, heating equipment, fans, incandescent and fluorescent lights, and, with Carrier Corporation, railroad air conditioning.

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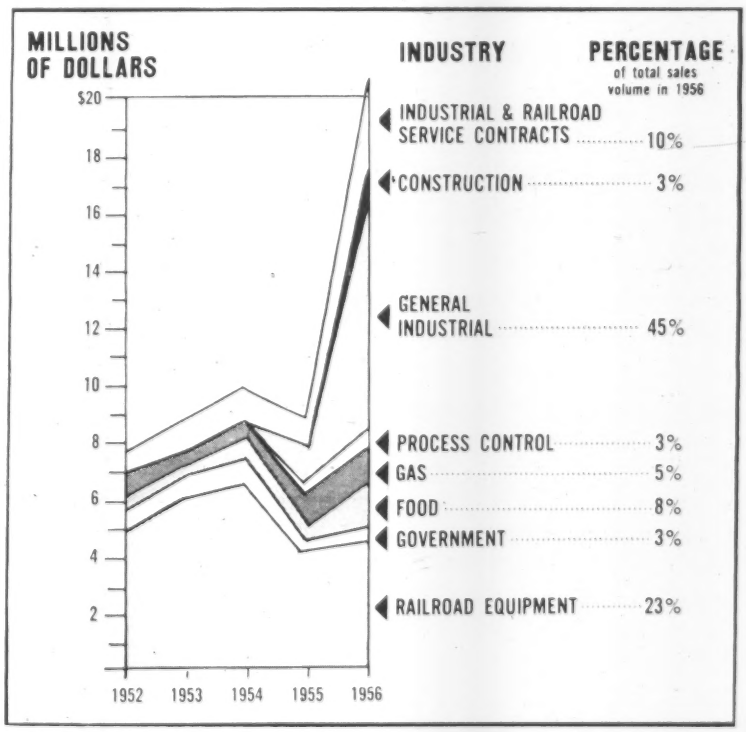
THE SALES STORY BY INDUSTRIAL CATEGORIES



IN THE 1800'S THE BEST WAY TO GET SOMETHING IN WASHINGTON WAS TO STAY HOME. IT STILL IS.

The Bettmann Archive

GETTING THE BUSINESS IN WASHINGTON

Winning Federal contracts or small-business loans is still nothing a man would do for recreation, but it's getting easier

ALFRED G. LARKE, *Employer Relations Editor*

A BUSINESS MAN once went to the nation's capital, checked into a hotel without a prior reservation, looked up the addresses of a couple of Government lending and procurement offices, visited them that day, got a nice loan to shore up his sagging enterprise, negotiated (without bidding) a profitable contract to manufacture 10,000 stainless steel whiffletrees, thanked the Government gentlemen, and said goodbye.

On the way back to his hotel, he took a quick look at a cherry blossom festival, stopped in at the Capitol and held a committee of legislators spellbound with his lucid clarification of a great national issue, checked out of his hotel, and caught the late afternoon plane home. He left without having been offered a single tip or piece of advice, free or otherwise, and without even a drink.

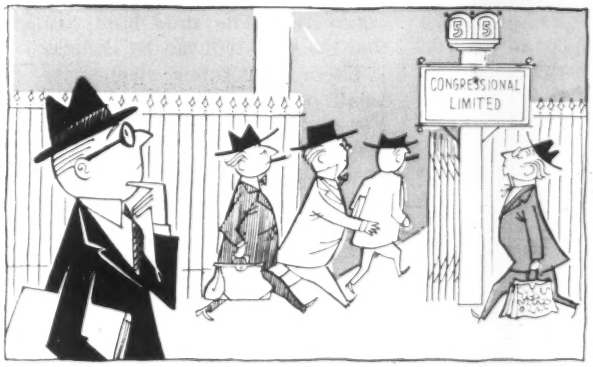
When he got home, he manufactured the 10,000 whiffletrees without snag or snare, stumbled over no fine print in his contract, delivered the goods, was paid promptly and in full, was not asked to renegotiate his profits, and is said to have lived happily ever after. "The Government are fine people to do business with," he said. "I wish I could have them for customers all the time."

Just who the lucky man was it is impossible to find out. One Washington observer (a kindly Providence keeps an ample supply of them stabled in the various bars about the capital, ready on an instant's notice to comment on anything or everything for resident or visitor) thinks the story is really about a couple of other fellows who lived in another country in a different age from this. Another reliable source says he thinks the plot came from one of Hans Christian Andersen's tales. And one official (the official greeter at a District of Columbia motel) suggests that the business man must have been smoking marihuana and probably never left home.

However that may be, small business men who have ever done business with the Government, or even tried to, will notice certain discrepancies between this man's experiences and their own. Getting money, orders, legislative favors, or other help from the Government could not be that beautifully simple, of course, or the dozen or more small business men's organizations now active on the scene would die for lack of membership. Lots of the big trade associations, too, which naturally get more calls for assistance from small members than from large ones,

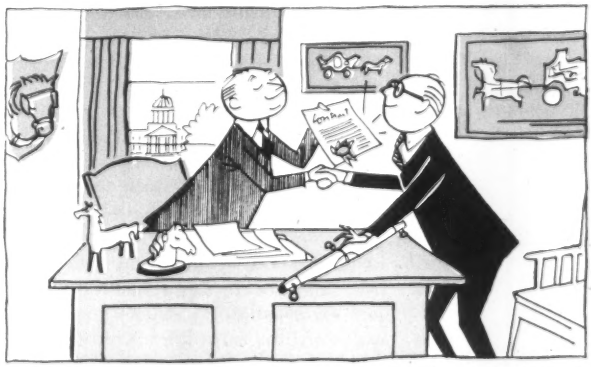
Hans Christian Andersen Up to Date; or A SMALL BUSINESS MAN in the WASHINGTON WONDERLAND—

Doug

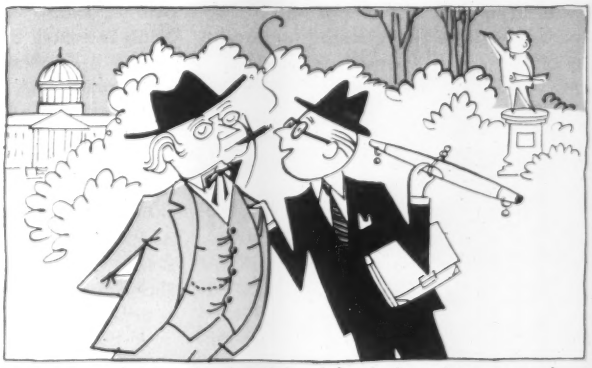


Once upon a time, a small business man went to Washington, without preparation, seeking a loan and a profitable contract.

Without trouble, he found the office where they were passing out money, and before the sun was overhead had received his share.

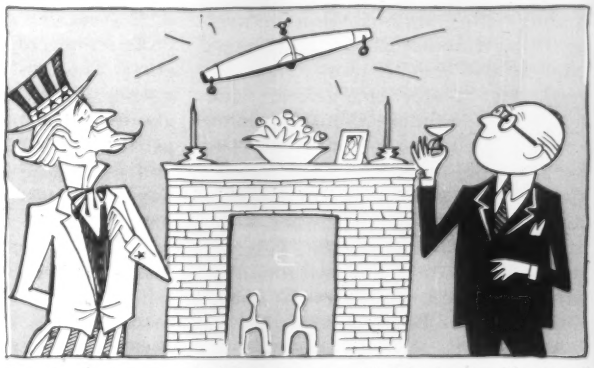


He dropped in at a procurement office and, with no red tape at all, landed a contract for 10,000 whiffletrees—his specialty.



On the way back to his hotel, he did a little sightseeing and set a couple of senators straight on a pressing national problem.

He completed the order without snag or snare, saw it sail through inspection, and was paid off promptly in crisp, new $1000 bills.



"Uncle Sam's a wonderful customer; wish I had more like him," he said. And, this being a fairy tale, he lived happily ever after.

would find their scope limited.

Yet there are in Washington:

- Tens of millions of dollars available for small business loans.
- Hundreds of millions of dollars of prime contracts "set aside" for small companies only.
- Untold quantities of technical and administrative advice for the company too small to afford its own consultants or experts.
- Two active Government committees, one at Cabinet level, working at simplifying procedures, cutting red tape, easing the flow of money into small business channels—and already producing tangible results without waiting to wrap up final recommendations.
- Ninety-six senators and 435 representatives who will jump twice as far and twice as fast for one small business man from their own districts as for a lobbyist claiming 10,000 members behind him.
- A variety of historic and scenic sites well worth visiting.

Look Homeward First

For most purposes other than sightseeing, a lot more can be accomplished at home, or at the nearest field or district office of one of the major Federal purchasing agencies or of the Small Business Administration (SBA). In many cases it has been planned that way especially to make things easier for the small company that can't afford a Washington representative or a lot of frustrating trips to the capital and trudging from door to door of the Government's hydra-headed agencies. Plans partly in effect, partly in process of being drawn up, will increase this trend. *Policy-making* will become more *centralized*, to assure greater uniformity of procedures, forms, and so on, throughout the country and among the various procurement agencies. *Contact* with the business concern will become more *decentralized*, for greater convenience and lesser costs to the small business man.

This is not to say that it will ever be as simple to do business with the Government as it is to buy or sell a pound of nails in a hardware store. In a transaction with the Government not just the buyer and the seller are concerned; it is every man's money that is being spent.

You or I, for our own convenience, may decide that any company with fewer than 1,000 employees is a small one, or that anybody hiring more than 50 people is a big business man, and it's not very much skin off very many people's noses which way we decide the question. But the company that is excluded from a Federal order by a definition that sets the limit low, or one that runs up against tough competition because the limit is high, may feel, sometimes with good reason, that it is being unjustly denied an opportunity to share in business generated from tax funds.

Justice Brings Complications

As a result, any changes made by the Government in its definition of a small business are likely to complicate matters rather than simplify them, even though at the same time they make contract awarding more equitable and just.

A good example is a change that was made effective January 1 this year in the definition of a small business for the purpose of awarding contracts. Originally, the company with fewer than 500 employees was small; with 500 or more it was large.

Today the determination is a lot more complicated. The benchmark is still 500, but application of this rule of thumb is no longer arbitrary. In an industry where the bulk of output is produced by very large corporations, SBA may find that employment of 1,000 still leaves a company in the small category. But a platinum refiner, a manufacturer of left-handed monkey wrenches, or a fabricator of horse collars with only a few hundred workers might be found to "dominate" his field and therefore be ineligible for rating as small.

A company may ask the SBA to certify it as a small business, or it may simply assert that it is one and, if no one challenges its statement, it *is* a small business so far as the procurement office is concerned. But other bidders or the procurement agency may challenge its assertion about its status. Then, regulations provide, the SBA must investigate and determine the facts—within ten days. The would-be small business has a right to appeal.

Since in any group that is large enough there are always one or two who like to indulge in hanky-panky (some groups are said to have even three or four), further regulations are necessary. There are two or three alternative ways of determining payroll size—average reported under the OASI program for the last four quarters, total as of the last quarterly OASI report, or (for new companies) average monthly employment. No conniver may qualify as a small business man simply by laying off enough employees on the date of his application or bid, then hire them back when he gets a loan or contract.

Thus what is often seen only as red tape creeps into the Government's relations with suppliers, but it is red tape designed to assure justice and to accomplish the purposes set forth in the laws favoring small enterprises. The time limit assures that the tape will not be endless.

There are other definitions of small business, for other purposes. For example, in the case of Federal loans, a manufacturing concern is small if it has 250 or fewer employees and does not dominate its field, large if it has more than 1,000. In the area in between, the SBA makes the determination, taking into consideration the usual size of units in that industry.

For wholesale concerns seeking loans, there is a different kind of measure: Annual sales of $5 million are the dividing line. For retail and service trades, the crucial point is $1 million of sales or receipts.

Other Improvements

There are other ways in which the Government's methods of doing business with small concerns, and sometimes with large ones, have improved in recent months. Last February, for instance, the Comptroller General told heads of departments, independent establishments, and the like to quit pushing suppliers around in regard to time discounts. In the past, many a Government agency had taken a discount for quick payment even though it actually paid slowly.

A Task Force for Review of Government Procurement Policies and Procedures, set up to devise means of carrying out recommendations of the Cabinet Committee on Small Business, pointed out that the theory of time discounts is that early payment permits the contractor to save by using his own funds instead of paying interest on loans to tide him over until the customer pays. For the small business man with limited funds, this is particularly important.

The Task Force suggested that

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In the life of every executive, decisions involving basic ethical principles are frequent—and many of the situations are so casual that it is easy to overlook the moral judgments required. Yet many small slips will eventually undermine the executive's integrity—and give rise to a cynical attitude among employees, customers, and public.

ETHICS AND THE EXECUTIVE:
The Small Decisions that Count

WAYNE G. BROEHL, JR.
The Amos Tuck School of Business Administration
Dartmouth College

THE SUEZ CRISIS not only posed far-reaching political and economic problems; it also brought to the fore fundamental questions of ethics and morality. That these questions should be highlighted with such clarity on the world scene is of more than coincidental importance to the business executive. For never before has the American business community been so deeply concerned about its moral responsibilities to individuals and society. Today's executive is again and again putting himself and his corporation through a rigorous process of soul-searching on these questions. And slowly but surely he is helping to evolve what Adolph Berle, in his provocative *Twentieth Century Capitalism*, calls the "corporate conscience." Almost unquestionably this concern for the "moral decision" has been one of the key end-products of broader stock ownership and the wide use of the professional manager.

Some Typical Cases

Certain case examples come to mind immediately, for their counterparts have been in the news continuously in recent months:

- The board of directors of a textile company decides to close three mills in upper Massachusetts and New Hampshire. When and how are the employees to be notified?
- The president of a machine tool concern is threatened with a proxy contest by insurgent interests apparently chiefly interested in a spin-off for short-term financial gain. He ponders whether to attack the opposition on a personal basis.
- The labor-relations manager of a construction company is promised labor peace in exchange for under-the-table payments.
- The sales manager of an aircraft company is led to expect preferential treatment on a Government bid if the company offers a certain Government official a job.

All these examples have one thing in common—they pose questions of considerable import. The wrong answer in any of the four cases could have initiated a chain of events that might have ruined the responsible executive or his company. We have, in effect, what we might call a "catastrophic alternative."

The executive facing such a situation will quickly recognize the importance of the problem; he can be expected in almost every case to perceive its moral and ethical, as well as its economic and political, elements.

Of course, business will always offer opportunities for immoral acts, and every period has produced a "robber baron" element. But the "age of the managers" has produced a climate of morality in business that has never been surpassed; the incidence of robber barons today is extremely low. And, while the exceptions may not be condoned merely because they are few, today's business executives may well be, in matters of the larger ethical issue, among the most moral of the representatives of the world's professions.

Day-by-Day Pitfalls

But the introspective concern with large-scale moral issues has further clouded another, and much less easily discernible, ethical pitfall. This lies in the executive's daily life; it is produced by his obligation to make hundreds of small-scale decisions, none of them catastrophic in themselves. But their cumulative effect is probably much greater than the results of one or two major decisions.

An executive, whatever his functional area, deals with people. Further, his relationship with these people is authoritative; he has, in a real sense, control over their destinies.

The moral implications of this fact are far-reaching. In small ways and over many, many minor incidents the executive exerts a fundamental impact on the characters of the people his influence touches. Often this impact is sizable. An executive with a

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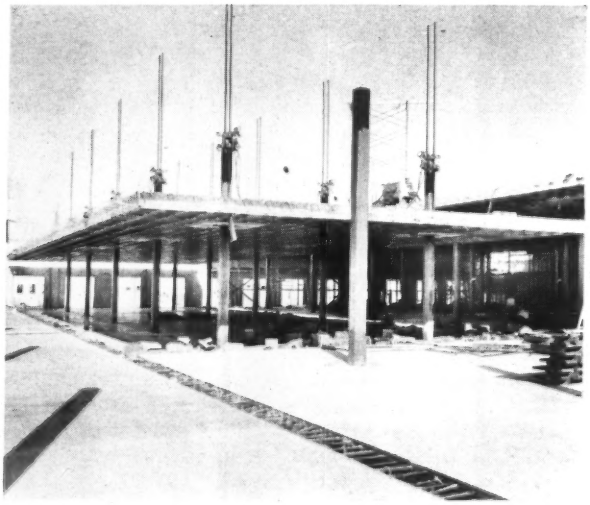
30 ideas for NEW PLANT BUILDINGS

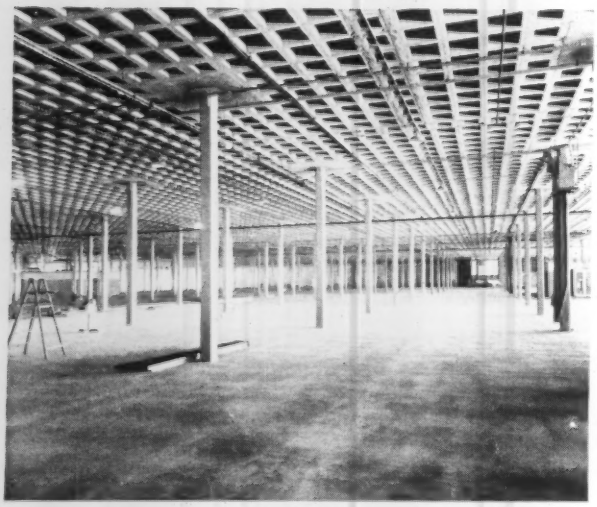
ANNESTA R. GARDNER, *Industrial Editor*

Need a new warehouse? A utility building? A whole new plant? Here's how to get one faster, cheaper, better suited to your needs.

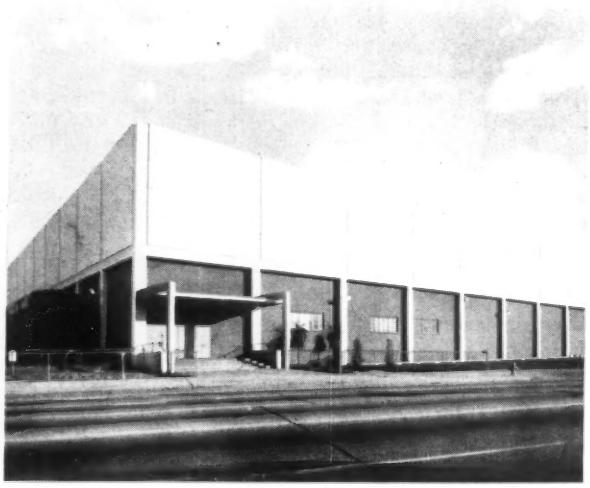
Paper boxes, used as forms over which concrete flooring is cast, provide low-cost way to achieve weight-saving waffled surface.



After casting, box inserts drop out as the floor is lifted into place. The supporting columns here are concrete-filled rolled steel tubes.



Interior view shows cast concrete floor in place. Architect here was Albert C. Martin. William Simpson Company was contractor.



Exterior view demonstrates neatness and simplicity of cast concrete construction. Building shell cost less than $3 a square foot.

IN CHICAGO, storage buildings that can hold 2 million pounds of packaged goods or more come to the site neatly rolled up on a truck—and are ready for use in less than an hour.

In Hawaii, a domed aluminum building 145 feet in diameter—big enough to seat 2,000 people—was erected in less than 24 hours.

A Montana contractor broke all records in putting up a laminated wood dome 300 feet in diameter and 90 feet high.

These are not just once-in-a-lifetime stunts. They demonstrate novel but practical construction methods and materials that can be applied to plant buildings of all kinds—warehouses, utility buildings, and complete factories.

Today, it is common practice to cast concrete floors and roofs on the ground and then pump them up to the desired level, or lift them with rubber vacuum mats.

Prefabricated wall sections come ready for immediate assembly.

Steel flooring has built-in raceways for electrical wiring and ducts for air conditioning.

Sheathing materials carry their own fastening systems.

It was not long ago that the choice of building materials was limited to brick, steel, wood, and concrete. Now, almost every conceivable material is being used in plant construction. There are aluminum, copper, and stainless steel structures, and buildings with walls of asbestos, hardboard, plywood, and glass blocks.

The prospective builder can buy a complete prefabricated structure of almost any size; or build his own, using such techniques as pole-type construction (see page 49). He can take advantage of new fastening systems that permit one man to do a job that normally requires two; and he can take his choice of a wide variety of prefinished sheathing materials, fabricated steel flooring and decking, curtain wall sections, and other components that are now available practically off-the-shelf.

Savings in time, and the consequent reduction in labor costs, are, of course, the key to many of the new developments in the construction field. With construction costs at an all-time high, any method that can save time, equipment, and materials is worth considering. And several of the buildings described here are inexpensive enough to be attractive even under "normal" conditions. The air-inflated coated-fabric unit pictured below, for instance, can be obtained for only a dollar a square foot—including auxiliary equipment and erection. Pole-type buildings with aluminum sheathing can cost less than a dollar and a half.

But low cost is not the only attractive feature of these new methods and materials.

Prefabricated building sections, for example, often permit greater flexibility in design and arrangement than standard walls and floors. (One modular curtain wall system is said to permit nearly 3,000 design variations.) They save space because they are thinner in cross-section. Their light weight makes it possible to use less expensive foundations and eases the load on structural members.

Many of the newer structural materials require little finishing and less maintenance. And many of them have a high degree of fire resistance that makes compliance with existing fire codes much easier.

Some of the new buildings have unexpected advantages. The coated fabric buildings, for example, are kept inflated by a low-pressure blower, and this means the interior temperature can be regulated just by controlling the air temperature.

This emphasis on new materials and techniques should not imply that standard construction is outdated. In some areas, building codes even now do not permit use of curtain wall sections and high-strength bolting. In others, construction costs may still be lower when standard building methods are used. Furthermore, it's not necessary to make a choice between an all-new and an all-old construction system. New sheathing materials can be placed over standard frames, and time-tested masonry construction combined with new framing systems.

The pictures on the following pages are just a sampling of new construction methods and materials. There are many other ways to get a new building rapidly and at relatively low cost, and many other suppliers, architects, and construction concerns who are working with new materials and design ideas.

But, looking over these examples, there should be little doubt that somewhere in the construction field today, there is a building or component that can meet almost any need, and a supplier or a construction company ready to put it to work.

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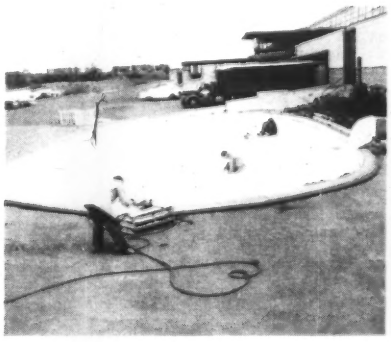
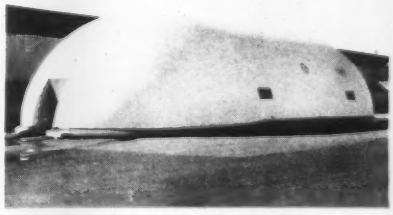
Rubber buildings can solve storage problems





Trucked to the site rolled up like a sleeping bag, vinyl-coated nylon building is inflated by small compressor, can be ready for use in less than an hour. Air Structures Division of Calumet Industrial District has them in sizes from 3,200 to 100,000 square feet.

Many materials are used

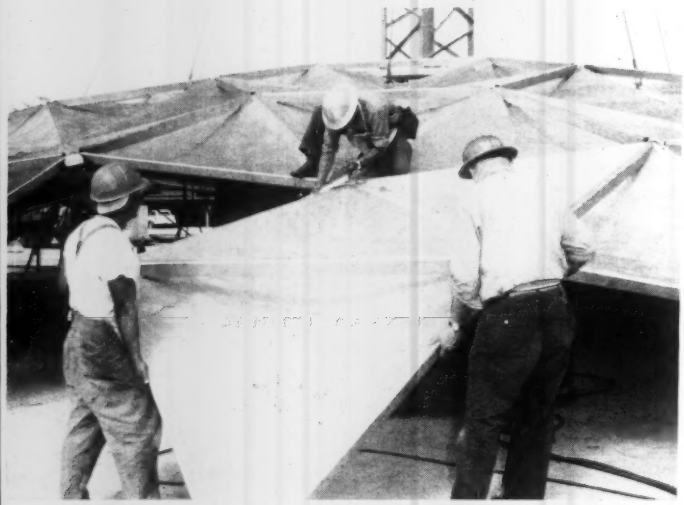
Stainless steel . . . porcelain enameled steel . . . plastic-faced brick and plywood . . . glass foam sandwiched in concrete . . .

These are only a few of the materials used in building today. Each offers new advantages in speed and efficiency of construction and maintenance; and in comfort for building occupants.

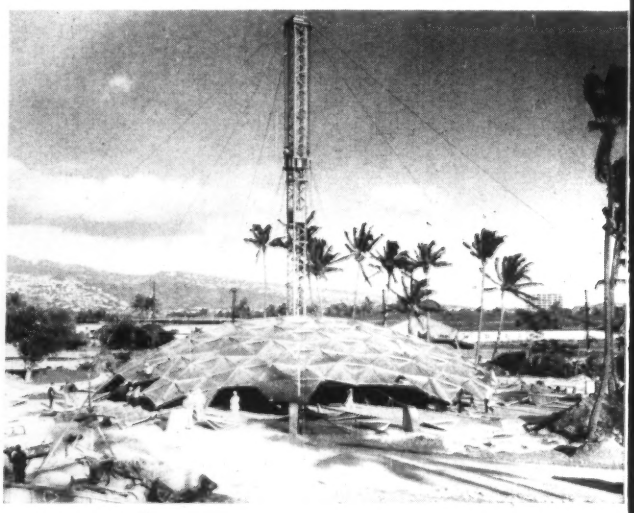
New insulating materials—foams, foils, and fiber mats—help to reduce heating and cooling costs.

Established building materials like masonry, wood, and steel are being made easier to use, better looking, and more durable than before.

Structural steel forms, reduced in section thickness and weight, permit lighter foundations and ease the load on structural members. Prepunched channel sections simplify fastening. Coated steel sheeting—aluminized steel, for example—is proving its abil-

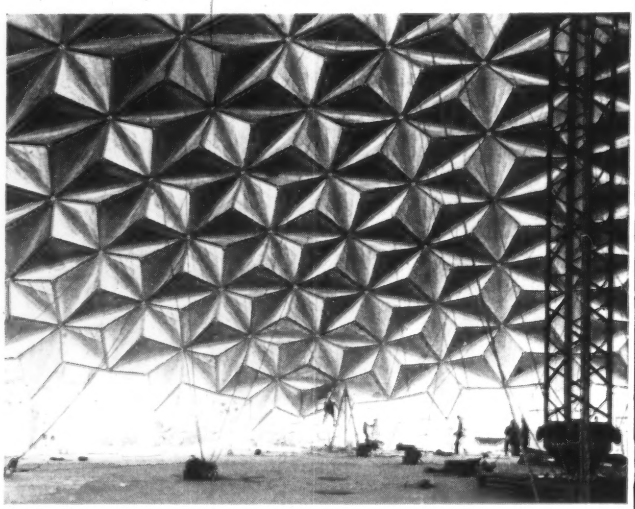


Diamond-shaped aluminum panels form the dome of spectacular new auditorium building in Hawaii. As each row of panels is assembled, dome is raised by portable mast located at its center.



Dome takes shape as one row of panels after another is added to the outer rim. Ten different panel sizes were used. 575 units in all. Job was done in 20 working hours by a 38-man crew.

Anchored to concrete piers, dome is now nearly complete. Its load-carrying capacity is said to be over 100 pounds a square inch, though aluminum sheet is little more than a 1/16 inch thick.



Interior view shows how the diamond-shaped sections lock together. Dome is 145 feet in diameter, nearly 50 feet high. Kaiser Aluminum & Chemical designed it, supervised construction.

ity to stand severe corrosive conditions and weathering (see photograph below). Porcelain enameled steel, too, is now widely used.

In masonry construction, there are now lightweight aggregates that bring structural savings, modular bricks to simplify design, and attractive ceramic veneers for curtain wall construction.

Wood, fortified by new preservatives, and combined with many of the newer sheathing materials, is moving into fields where it was never even considered before. For example, pole-type construction, using pressure-treated wood structural members, has long been common on farms. But industry made little use of it. Now, impressed by its simplicity, low cost, and durability, manufacturers and distributors are adopting it for a wide variety of buildings.

For example, one brand new titanium-processing plant has four pole-type buildings, including a 91- by 67-foot unit with aluminum siding and roofing that was completed in less than half the time that would have been required for a standard structure.

As yet, plastics have not made too much headway as primary structural materials for permanent industrial buildings. This is partly because a factory or warehouse is expected to last for a score of years or more, and there has been no backlog of experience to give architects the confidence to specify new plastics for such applications. Now, however, plastics suppliers are setting out, as aluminum and stainless steel producers did 20 years ago, to accumulate the needed performance data, using their own plant buildings as guinea pigs. One example is pictured below.

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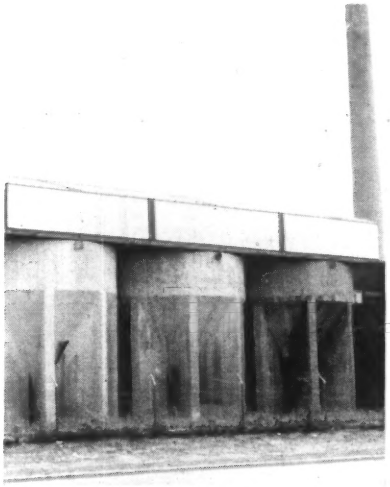


Armco Drainage & Metal Products, Inc.

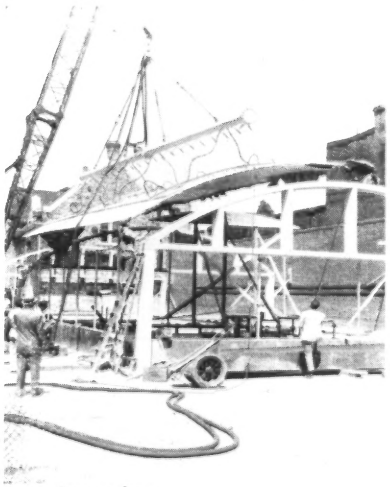
Aluminized steel building replaces wood roofing on paper company's white water storage tanks, saves weight, lasts longer.

U.S. Steel Corp.

Stainless steel panels get their first large-scale curtain wall test in this new office building. Enameled steel is also being used here.

Timber Structures, Inc.

Laminated wood forms framework for 300-foot dome of Montana arena. Arches were assembled on ground, hoisted into position.

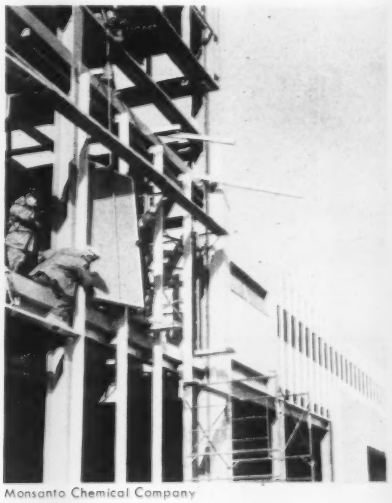


Vacuum Concrete Corp.

Concrete shell, cast on the ground in two sections, is lifted by rubber vacuum mats and held in place by poured-on joints.

Pittsburgh Corning Corp.

Cellular glass blocks, faced by natural limestone form insulating curtain wall panels for Pennsylvania State Office Building.



Monsanto Chemical Company

Plastic structural materials including sandwich panels and plastic-faced cement blocks, will get major test in this building.

These ideas speed construction

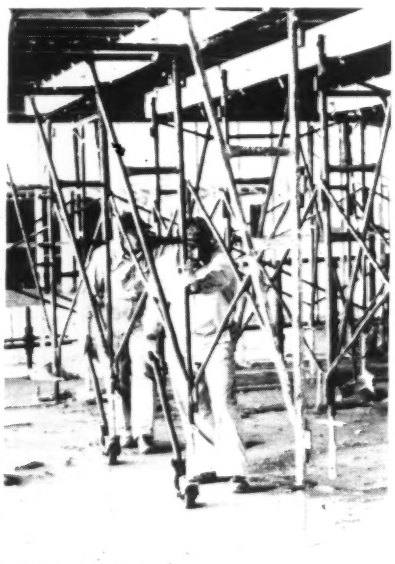
New ideas are coming fast in the construction industry these days. The recent building boom, coupled with rising construction costs, has spurred the hunt for shortcuts and speeded their acceptance. Many ideas that languished for years are now being put actively to work.

High-strength bolting is a good example. It offers a lot of advantages. Yet, as recently as three years ago, less than 2 per cent of the buildings under construction were designed to use it. The reason:

Changes had to be made in existing building codes before the system could be applied on a large scale, and they weren't being made very

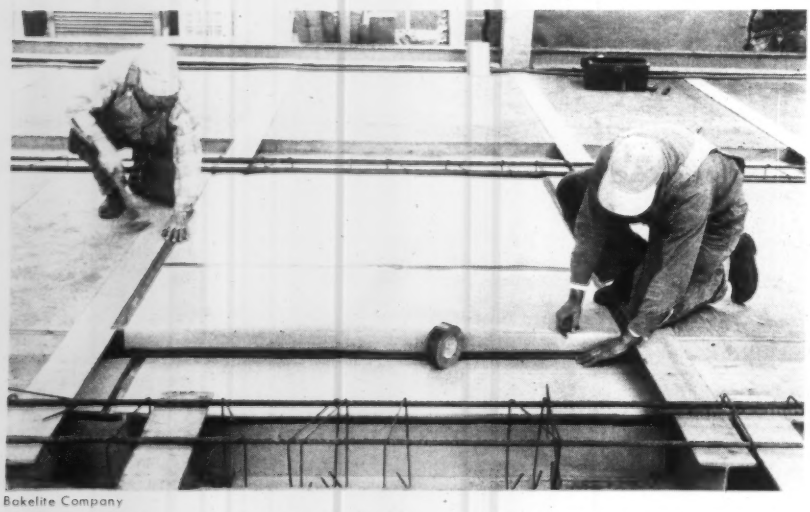
Ceco Steel Products Corp.

Metal forms can be used to cast waffled concrete slabs when extra-smooth surfaces are needed. Metal forms cost more than cardboard boxes (see page 46), but can be re-used. These have built-in nozzle for air jet that sets them free when concrete has hardened.



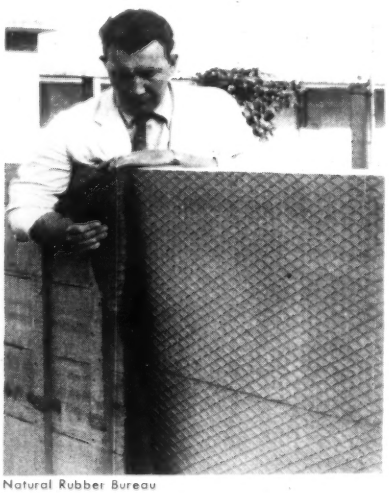
Universal Manufacturing Corp.

Mounted on casters, scaffold shoring rolls easily from place to place, then rests firmly on flat-based jacks while concrete is poured.



Bakelite Company

Plastic-coated paper and tape, used to line wooden forms for casting flat concrete slabs, prevent moisture seepage, and protect concrete while it cures. Lowe Paper Company developed the technique, says it insures smooth, hard surface that is easy to paint.



Natural Rubber Bureau

Rubber mat gives cast concrete a textured surface; also serves as moisture vapor barrier; strips off easily when job is done.

rapidly. Then, the industry got behind the idea and pushed. Approvals were secured, and high-strength bolts are off and running. Fastener manufacturers predict that three years from now they will be used on 50 per cent of the buildings under construction.

Big savings in building—as in so many other jobs—often come from a happy combination of ideas which are not in themselves new, but which can be joined together to provide a new approach to old problems.

Lifting with rubber vacuum mats, for instance, is not new. But casting a shell roof on the ground and then putting it in place as shown in the photograph on page 49 does represent a new departure.

Prepunched steel channels aren't new, either. But the application pictured here is.

Often, a new material can be fitted into an old job with savings of time, labor, and overhead. Paper and cloth tarpaulins, for example, have long been used to keep out wind and rain while construction is in progress. But transparent plastic film (photograph below) provides an added advantage by letting light in while it keeps the weather out; and, according to the supplier, the plastic costs less than cloth and no more than the special construction paper that was required.

In planning almost every building, there are opportunities to save time and cut costs by applying a little imagination to the job. It's particularly worth the effort right now when ideas like those pictured here can spell the difference between a practical, budget-minded building program and no new buildings at all.

Bakelite Company

Plastic film keeps out wind and rain, yet lets light in so work can continue even on stormy days. Film, supplied by Visking, comes in 100-foot rolls, 13 feet wide, is held in place by thin wood strips.

Reflectal Corp.

Aluminum foil insulation is easily installed, even in old buildings, to keep down heating and cooling costs. Here, it's stapled in place. In metal buildings, supplier says self-tapping screws can be used.

Marietta Concrete Corp.

Precast wall panels come to the site ready to lift in place. These, of insulated concrete, are faced with natural green stone.

Steelcraft Manufacturing Company

Prepunched, embossed holes on steel purlins simplify attachment of roofing. Man locates holes by striking sheet with mallet.

Russell, Burdsall & Ward

High-strength bolts are replacing rivets on many structural jobs. They reduce noise, save time, and provide strong, tight joints.

Devaney Photograph

POPULATION CHANGES CAST LONG SHADOWS

RALPH J. WATKINS
Director of Research, Dun & Bradstreet, Inc.

Population changes can be predicted with reasonable accuracy, but what of business births and deaths? If the pattern of the past persists —and it has persisted rather consistently—the number of business concerns in the United States should be close to 5 million in 1965 and not far from 6 million in 1975.

POPULATION changes do cast shadows long as the years—births, marriages, deaths, all those changes that characterize the cycle of life.

On an average day of 1957, more than 11,500 American babies will be born; more than 4,300 marriages will take place; and approximately 4,300 Americans will die. Each such average day in 1957 will bring a net increase in our population of almost 8,000, of which about 90 per cent will represent the natural increase, or the excess of births over deaths, net in-migration accounting for the rest.

Consider the more than 11,500 American babies who will be born today, of this year's prize winning crop of more than 4.25 million babies. Those blessed events will set in motion a long unwinding series of developments, and nothing can ever be the same in those families—or in the economy that must meet their needs. Already, over the months, layettes have been accumulated, and they will be added to month by month. More space needs begin to assert themselves, and perhaps there is soon talk of a move to the suburbs. Other shadows point toward school's beginning at 5 or 6, or kindergarten before that; high school at 13 or 14; and graduation at 17 or 18. The episodic pattern of progress through the school years will strongly make its impress on markets, on production, and distribution and consumption. For the girl babies among these 11,500 births today, there is a long shadow pointing toward marriage at about 20 or so, marriages to boys born on the average about two years ago.

With marriage we will be off again, on the endless spiral of time.

The simplest of all our statistics is the national headcount. Article I, Section 2 of the Constitution of the United States: "The actual enumeration shall be made within three years after the first meeting of the Congress of the United States, and within every subsequent term of ten years. . ." And in Section 9: " . . . the census or enumeration herein before directed to be taken." Securely anchored in the Constitution itself, this national census or headcount has been taken every tenth year beginning with 1790. That first census, August 2, 1790, recorded 3.9 million persons. The lengthened shadows of those 3.9 million yielded a count of 150.7 million at the seventeenth decennial census, April 1, 1950.

This tenth-year headcount not only provides the basis for representation in the Lower House of the Congress,

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A SPECIAL REPORT

prepared for DR&MI by
Commerce Clearing House, Inc.

CITIES ON THE TAX MARCH

City taxes have been quietly edging upward—and outward into new types of levies that are boosting the cost of doing business. Here is a summary of what important cities are doing to raise their take, a factor of increasing importance in choosing new company locations.

ALL EYES have been glued on the breathtaking spectacle in the main tax tent in these postwar years. In the center, Uncle Sam ringmasters the collection of $75 billion of taxes. In the side rings, the states push their tax collections up over $13 billion, tripling their take since 1942.

All the while, the cities are staging an exciting tax sideshow of their own. Residents of tax-innovating cities like Philadelphia, New York, Chicago, Los Angeles, and many others are well aware of the rising price they pay for their local government. But the impact is also beginning to be felt in all parts of the country. New York City, state within a state, led the parade with its local sales tax, which began in 1934. California cities were authorized to impose sales taxes in 1945. Pennsylvania cities and local government districts sought and received special taxing authority in 1947. More recently, Illinois cities, led by revenue-hungry Chicago, successfully sought sales taxes of their own, collected with the state's sales tax.

As a result, today the cities in 20 states collect their own sales or gross receipts taxes. A lesser but highly significant number of cities impose income taxes. Philadelphia and Pittsburgh use both mercantile license taxes based on sales volume and income taxes to support their local operations. Also contributing to the local tax picture are city gasoline and cigarette taxes.

New York City's taxing system matches its size. In addition to the sales and business and occupation taxes based on gross receipts, New Yorkers pay hotel and general occupation taxes, admissions, cigarette, public utility, and insurance taxes. All this is accomplished under closely restricted legislative authority and complex enabling acts. And New York City is reaching out for even more revenue. A bill put before the legislature this year sought to tax the receipts of hat-checking facilities.

The forward march of city taxes continues in legislative sessions now under way in most states. Pending now in Colorado, Iowa, Washington, and Wisconsin are bills to permit cities and towns to impose sales taxes. A bill to permit city income taxes has been introduced in Kansas. New Mexico proposes to liberalize the gross receipts tax, now allowed to cities of 75,000 or over, so that towns and villages of 5,000 or over can collect it too. These and other similar measures will undoubtedly have serious consideration from one end of the country to the other as 1957 legislative sessions progress.

It was not always so. Once upon a time—and not too long ago—the property tax was the chief local revenue producer. "The thing generally laid

on city land is taxes" was and still is true. Except for local license fees imposed mainly on trades and occupations and coupled in many cases with some measure of regulation, cities and counties depended on real estate levies for revenue.

The big change began with the depression. Property values collapsed, and so did tax collections. At the same time the big industrial cities, particularly, had to help feed and clothe hordes of jobless. Federal and state aid came, but not before financial chaos overtook many a city. Deferred pay for school teachers, defaulted bonds, tax anticipation warrants tell the story of the 1930's to many city dwellers.

After World War II, local tax crises threatened to develop again. Public building programs, held in abeyance because of war shortages of material and manpower, suddenly demanded attention. Soaring wartime and postwar birthrates sent more children to school. In city after city, more school buildings, more education services, became acute problems; and the end is not in sight. At the same time inflation increased the cost of municipal building and services.

The flight to the suburbs gathered momentum at about the same time. People and business firms alike have been moving out away from corporate limits to build up the peripheries around most cities. This flight has in some cases reduced property tax yields within the city itself without correspondingly reducing the cost of city government. One big city mayor bitterly asked why he should build superhighways to funnel people into town in the morning to their jobs and back to the suburbs at night where they lived and paid property taxes. Recently the "Letters to the Editor" column in a metropolitan daily ran this complaint from a landlord:

"It's time the 'free-loaders' in this town paid their way. I will even be willing to subscribe to a payroll tax. This will insure a fair share of contribution to city expenditure and maintenance by the suburban chiselers and moochers who like to play and work here but live out of town."

Tax collection figures tell a vivid story of the changes in local fiscal affairs since 1942. In that year, the property tax accounted for 87 per cent of the nearly $2 billion in tax revenue collected by cities with a population of 25,000 or over (which account for four-fifths of all city government revenue). The other 13 per cent of the revenue was almost equally divided between license and sales or gross receipts taxes, with the scales tipped for licenses. Eight years later in 1950, these cities were collecting nearly $3 billion. But only 76 per cent of this came from real estate taxes. This trend continues. In 1955

BIG CITY TAXES

(Special taxes imposed by cities of 400,000 and over)

	SALES	INCOME	GAS	CIGARETTE
New York City	○			○
Chicago	○			
Los Angeles	○			
Philadelphia[1]	○	○		
Detroit				
Baltimore			○	
Cleveland				
Washington	○	○	○	○
St. Louis		○	○	○
Boston				
San Francisco	○			
Houston				
Milwaukee				
Pittsburgh[1]	○	○		
New Orleans	○			
Buffalo[2]	○			
Dallas				
Seattle	○			
Minneapolis				
Cincinnati		○		
Denver	○			○
Kansas City, Mo.			○	○
San Diego	○			
Atlanta				
San Antonio				
Newark, N.J.				
Indianapolis				
Memphis				
Oakland	○			
Portland, Ore.[3]		○		
Columbus, Ohio		○		
Louisville		○		

[1] Philadephia and Pittsburgh levy mercantile license taxes based on sales volume.
[2] Erie County.
[3] License tax based on gross receipts or net income.

(the most recent year for which figures are available), the cities collected more than $4 billion, but property tax yields showed a further drop to 73 per cent of the total.

Today 33 states impose sales taxes, and the number keeps growing. Sales taxes now rank as the chief state revenue producer nationwide. No wonder, then, that many cities took their cues from the states and centered on sales and gross receipts taxes as effective and relatively painless ways to get the money needed for municipal operations. New York City was the first to impose a general sales tax. The Empire State itself does not tax sales; its revenue comes mostly from the income tax. The Gotham rate is high—3 per cent—in keeping no doubt with the revenue needs of the nation's metropolis. New York counties, except those comprising New York City, are also authorized to levy sales taxes. Erie (Buffalo), Monroe (Rochester), and Broome (Binghamton) are the counties that have enacted sales taxes. A few New York cities—Auburn, Niagara Falls (including the Niagara Falls School District), Poughkeepsie, and Syracuse—also tax sales.

Broad Powers Granted

In Pennsylvania, the legislature made a broad grant of local taxing power in 1947. As a result, 3,600 cities, boroughs, towns, townships, and school districts have the power to impose any tax the Commonwealth may levy but does not now impose. Under this broad grant, local mercantile license taxes based on sales volume spread from one end of the Commonwealth to the other. The Pennsylvania selective sales tax, levied in 1956, is not considered a deterrent to the local taxing authority.

City sales taxes were initiated in California in 1945. Thereafter innumerable cities enacted a sales tax, usually at the rate of one-half of 1 per cent. As is the custom, most of these local ordinances were initially enacted on a temporary basis that, following the pattern, later became permanent. Use taxes followed. Eventually most of the principal California cities increased the rate of their local sales and use taxes to 1 per cent.

In 1955 the Legislature passed the Uniform Local Sales and Use Tax Law, permitting counties as well as cities to impose a 1 per cent sales and use tax. Administration of the local taxes was combined with the state tax.

Before the Uniform Law, almost 200 California cities had enacted local sales taxes. After the Uniform law, 28 counties passed coordinating ordinances, and at the present time six more counties are revising their laws to become a part of the uniform sales and use tax system. As a result, the California pattern varies. In San Francisco, it's a locally collected purchase and use tax, while in Los Angeles, it's a county and city sales and use tax as the aggregate rate of 1 per cent collected by the state.

Illinois cities and towns received authority to impose sales taxes in

NUMBER 7 IN A SERIES

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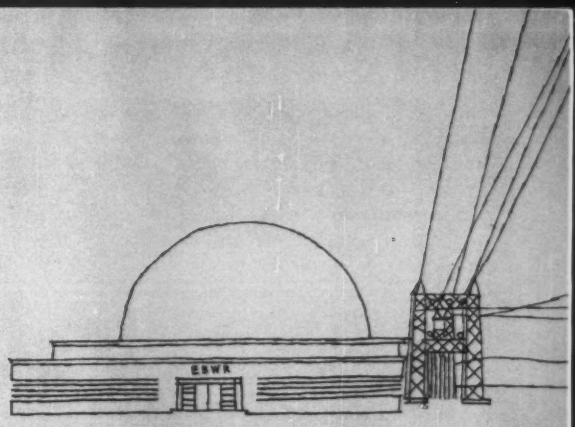

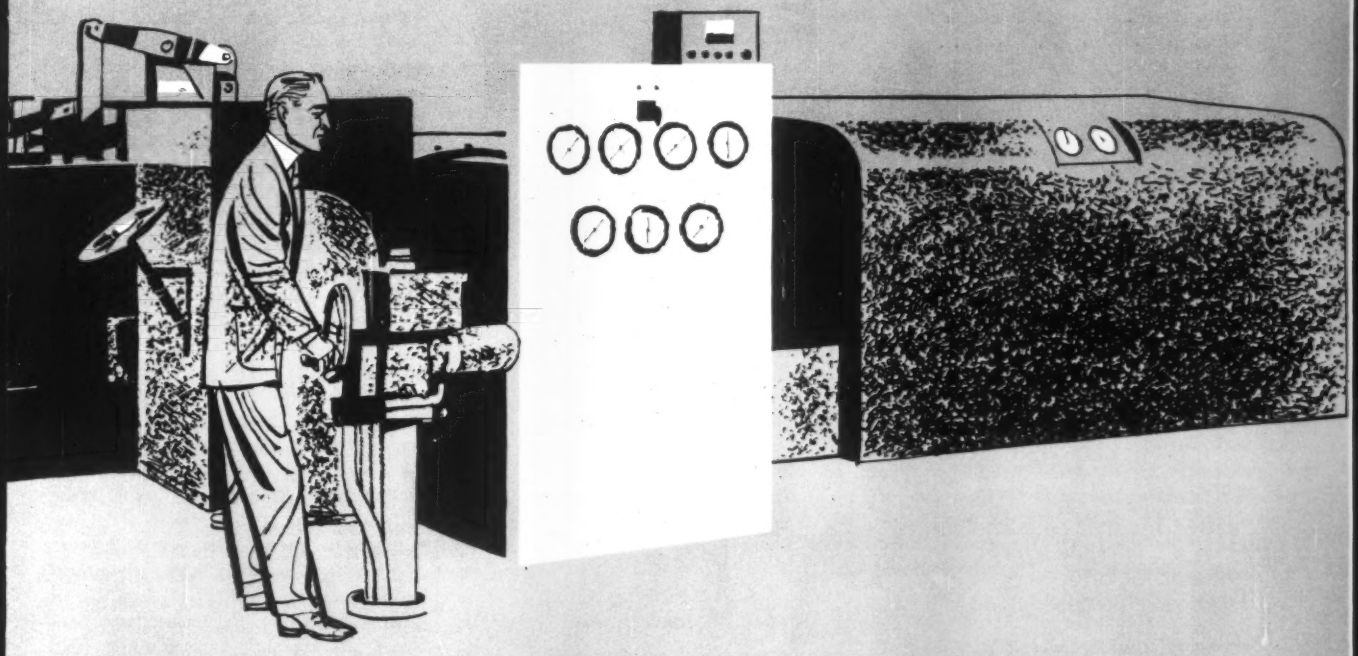

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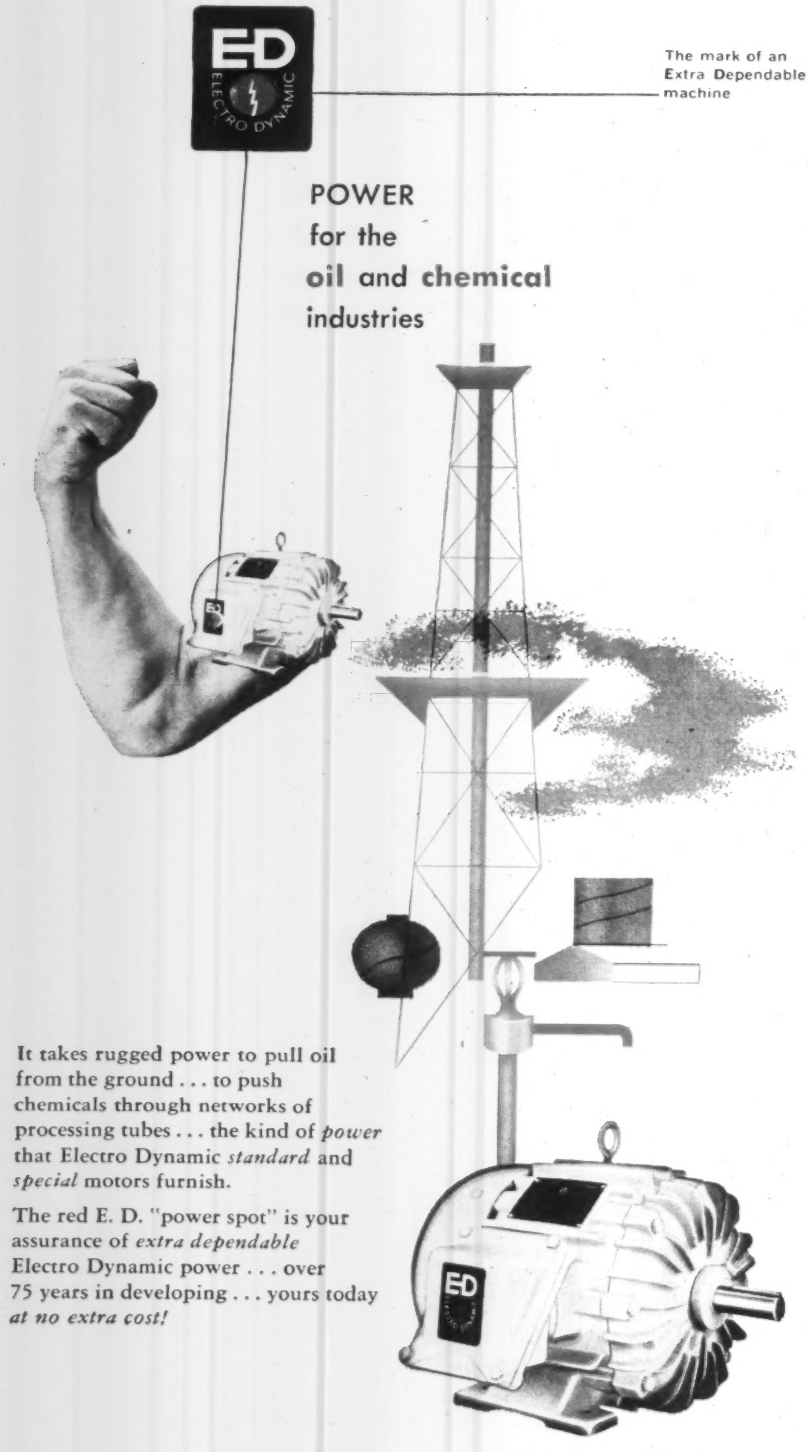
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1955. Here the statewide pattern is followed, with the local bodies permitted to tack on an extra one-half of 1 per cent to the state's 2½ per cent tax. The state collects the entire amount and then remits part to the local bodies. More than 900 cities and towns have hooked onto the sales tax bandwagon.

Varied Patterns

In other states, the local sales tax pattern varies. In Alabama five counties—Colbert, Franklin, Lauderdale, Marion, and Tuscaloosa—levy sales taxes under local laws enacted by the State Legislature. In addition, some cities (Anniston, Florence, and Huntsville) levy sales taxes under the general licensing powers granted cities.

New Orleans levied a sales and use tax in 1938. In 1950, all Louisiana cities were authorized to levy a 1 per cent sales and use tax upon approval by the voters. Baton Rouge and Bogalusa have adopted 1 per cent sales and use taxes pursuant to this.

The parishes (counties) of Jefferson and East Baton Rouge have levied a 1 per cent sales and use tax under specific state authorization. The tax in East Baton Rouge Parish cannot be levied on sales made within Baton Rouge city limits.

In 1950, the Mississippi Legislature authorized cities to levy a sales tax to be collected by the state. Today such taxes are levied in more than 40 cities, including all the larger cities in the state.

Phoenix, Prescott, and Yuma (Arizona) levy gross income taxes under their home rule charters. In Colorado, Denver and Pueblo impose sales taxes under unique home rule charters granted by the State Constitution. Portland, Ore., levies a limited gross receipts tax. Salt Lake City, Logan, and Provo in Utah have gross receipts taxes. Richmond and

—ABOUT THIS ARTICLE—

So much reader interest was evoked by DR&MI's recent article on state taxes ("Are State Taxes Too High?" November 1956), and so many requests received for a follow-up discussion of municipal taxes and their impact on business, that the editors arranged for this special report from Commerce Clearing House, Inc. (New York, Chicago, Washington). CCH specializes in the reporting of tax and business law, and among its more than 100 Topical Law Reports are individual units for each state reflecting the state and local tax picture. This article was prepared by the editors of CCH's State Tax reports.

other Virginia cities levy merchant's license taxes. Washington, D.C., has the benefit of the District of Columbia sales tax. Washington cities levy business and occupation taxes measured by gross proceeds of sales.

City Income Taxes

Extremely important where they exist, but not as yet a big factor in municipal finance, are income taxes. Perhaps the all-pervading Federal income tax and the impact of income taxes in more than 30 states holds the cities back from tapping this source of revenue. The initial city income taxes were levied in Pennsylvania. Today Philadelphia, Pittsburgh, Erie, Scranton, and scores of other cities tax personal net incomes of their residents and incomes of nonresidents earned in the city. The Philadelphia rate is 1.5 per cent, while the aggregate for city and school purposes in other cities cannot exceed 1 per cent.

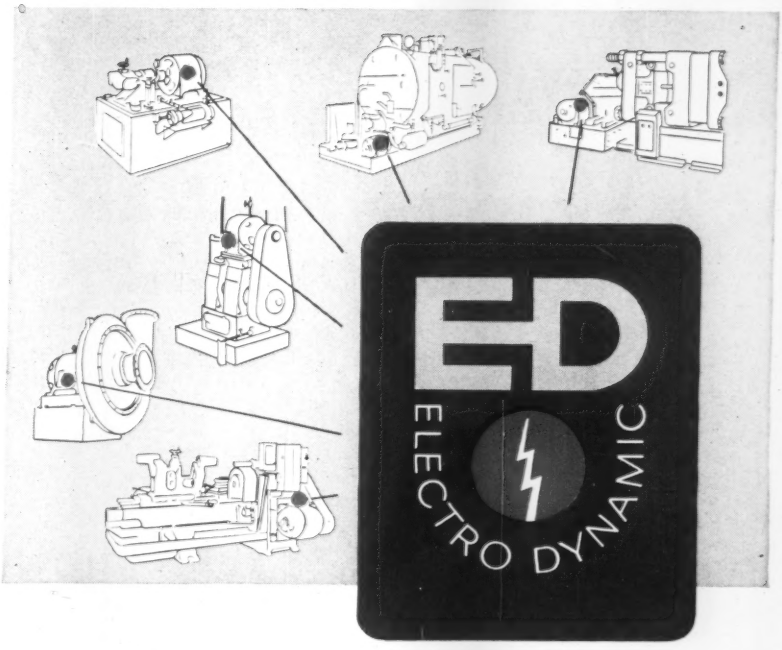
Pennsylvania cities uniformly tax all income of residents from wages and business profits, wherever earned, whether outside the city or even outside the state. But nonresidents (whether nonresidents of the city or the state) are taxed only on wages and business profits from sources within the city.

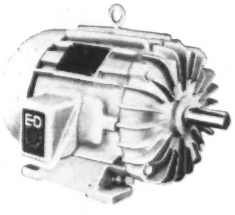
Pennsylvania school districts, on the other hand, are permitted to tax only residents, with the result under the over-all 1 per cent limitation that the city usually collects the income tax at a higher rate from nonresidents than from residents.

Toledo, Ohio, began taxing incomes in 1946. It was the first city to levy a tax on both individual and corporate income. Many other Ohio cities followed this lead, including Canton, Cincinnati, Columbus, Dayton, Springfield, and Youngstown. In Ohio the local rates range from one-half of 1 per cent to 1 per cent.

St. Louis began an income tax on individuals and corporations in 1948, but this expired two years later. However, in 1952, it reimposed the tax at one-half of 1 per cent, which is the rate today. Kansas City, Mo., electors rejected March 1957 Charter amendments for a 1 per cent income tax on individuals and corporations.

Louisville and Lexington, Ky., levy an income tax on individuals and corporations. The Louisville rate is 1.25 per cent; the Lexington rate, 1.5 per cent. Washington, D.C., resi-





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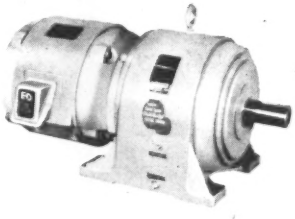

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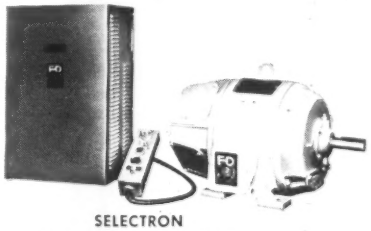

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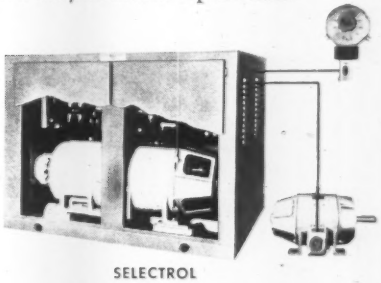

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dents pay the District of Columbia income tax.

Local income taxes hit the suburbanite who earns his pay or carries on his business in the big city. In many localities the suburbs strike back by enacting their own taxes. The resulting double tax is sometimes remedied by giving the suburbanite a credit for the tax paid to the city where he works. This is true in Pennsylvania and in recent Ohio ordinances for Cincinnati and Youngstown suburbs.

An important common feature of all these city income taxes is withholding at the source from wages and salaries. Local employers find this a burdensome requirement. Companies operating interstate must also withhold income tax from their employees' paychecks if they operate business establishments within the city. A large number of nationwide firms have had to arrange compliance with the Louisville, St. Louis, and one or more of the Ohio and Pennsylvania city income taxes. A distant home office payroll department must keep on its city tax toes as it has long since learned to balance the assorted state tax complexities.

That favorite of the taxers, gasoline, contributes to the city tax picture but not so heavily as to the states. So far only a few cities levy their own gasoline taxes, though in most states cities receive a share of state gasoline tax collections. St. Louis and Kansas City, Mo., are the only major cities to impose a gasoline tax. Also in Missouri, St. Joseph and Springfield tax gasoline. Mobile and Montgomery, and a few other Alabama cities (but not Birmingham) have such taxes. So do Albuquerque and Santa Fe in New Mexico, Casper and Cheyenne in Wyoming, Pensacola, Fla., and certain counties in Mississippi.

Tobacco Taxes

Playing a somewhat minor role in city fiscal affairs are local cigarette and tobacco taxes. Among large cities, New York, Baltimore, Denver, St. Louis, and Kansas City lay taxes on cigarettes. The Baltimore tax is high, 3 cents per pack of twenty; the Denver, St. Louis, and Kansas City rate is 2 cents; New York charges 1 cent. In Washington, smokers pay the District of Columbia 2 cents a pack. Atlantic City, N.J., Montgomery, Ala., and a few other large cities

also tax tobacco locally, in addition to many smaller cities that have tobacco taxes. Chicago's 1 cent per pack cigarette tax, first imposed in 1953, was allowed to lapse when Illinois cities were authorized to levy a one-half of 1 per cent sales tax collected by the state in connection with its 2.5 per cent retailers occupation or sales tax.

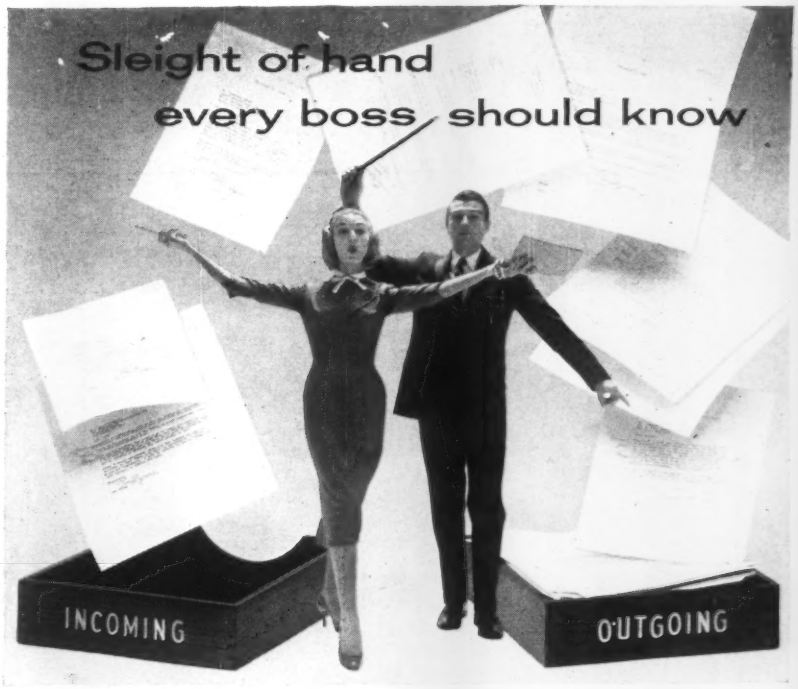
What Can Industry Expect?

The city tax handwriting on the wall suggests any number of possibilities. The rapid development of new and diverse municipal levies since World War II seems to indicate that more rather than less such expense is a reasonable contemplation. As city revenue goes up, real property bears a lesser share of the total, while sales and other special taxes yield more revenue. Thus the tax load shifts, but the expense remains.

At the moment, it's difficult to spot a pattern that points up differences based upon the size of the city. Enough smaller towns levy special taxes to prove that revenue hunger is not unique to the metropolis. The rapid spread of sales taxes and the relative ease of collecting them suggests that more sales taxes by more cities may well emerge in the future.

The choice of plant sites, the location of stores and other business establishments has almost always involved an examination of the state tax situation. The current upsurge in city taxes now makes it equally essential to examine enabling acts and statewide measures that show what the city tax future is apt to be.

"I'm new here. Which one of you is the patsy?"



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BUYING A BUSINESS?
continued from page 39

agement, what reason have we to think we can handle two businesses better than one?

- Instead of acquiring, should we consolidate and maximize short-run profits, or should we sell out while we can?

Objective answers to these questions may indicate that the company should not acquire another concern. But if it finds it can justify acquisitions generally, it might want to examine a third point before pursuing specific propositions.

A Consistent Program

After a merger program has proved to be sound corporate strategy for the company, management should be prepared to follow a tactically sound acquisition program. This should be a long-range program to be followed consistently, not picked up and dropped with every minor swing in company fortunes.

It should be recognized that acquisitions are a top management function requiring centralized responsibilities and procedures for securing prompt decisions from the president and the board.

The company must be prepared to forego all proposals, especially the distress situations and apparent bargains, that do not fit its needs. Worthwhile "special situations" are very rare, especially in the current seller's market; they demand skeptical scrutiny.

The company should budget an extensive investigation of the selling company by staff or outside sources before concluding any transaction. It should walk away from those pressing propositions that demand a decision before they can be investigated, and reject those situations that are so confidential the buyer cannot be told the very things it should know until after the closing.

Above all, the buyer should practice fair dealing with acquired companies, their employees, suppliers, and customers. The temptation to opportunism is prominent in merger situations; its penalties are manifold. Aside from the damage it causes to a buyer's standing with all his publics, a reputation for unethical practices can also make it extremely difficult to attract other worth-while companies for a merger later on.

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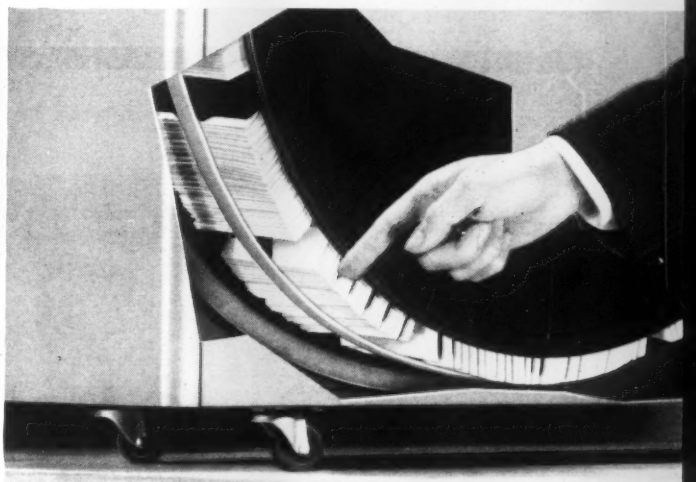

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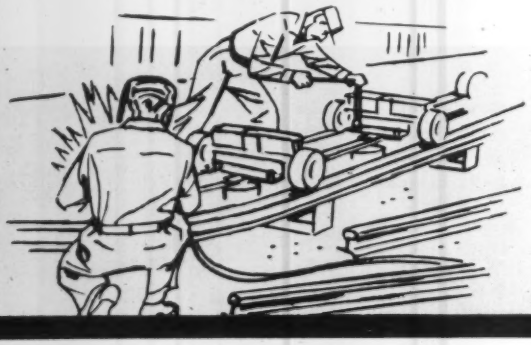

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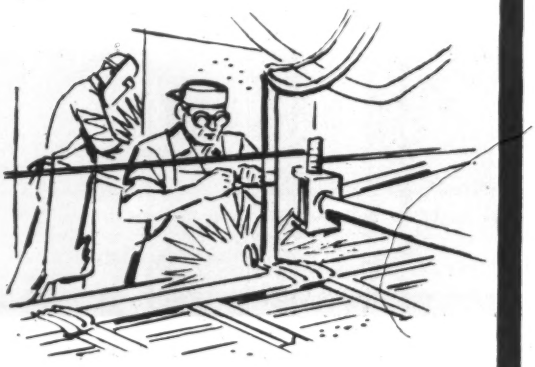

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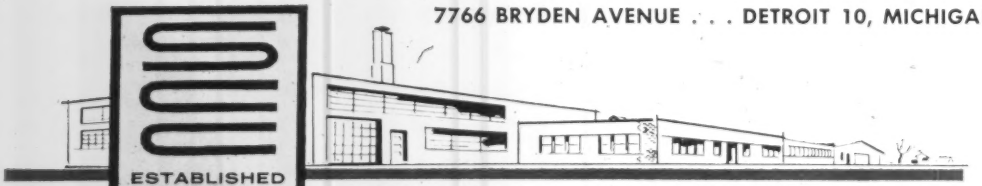

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Too much normalcy?

THE ORGANIZATION MAN *by William H. Whyte, Jr. Simon and Schuster, 630 Fifth Avenue, New York, 429 pages, $5.*

Business philosophy—as expressed in public utterances—still hews to the line of rugged individualism. But back in the offices of the same executives who speak out so forcefully on the subject, Mr. Whyte finds, the "social ethic" has taken over: Adjustment to the group is the highest good; originality tends to be suspect. And the "human engineers" with their testing, training, and communicating are not only exalting mediocrity on the job; they are attempting to extend their influence beyond the business sphere into the private lives of executives and potential executives.

Mr. Whyte may exaggerate the degree of conformity and regimentation at present existing in big business, but top managements everywhere would do well not to dismiss his attack lightly. Although large-scale enterprise has produced tremendous advantages, it is undeniable that it reduces the scope of the individual and make impossible the free-wheeling tactics of another age. Yet adjustment implies content, and content is apt to be the enemy of progress.

It should, perhaps, be added that all executives—at the top and down the line—are likely to find the book well worth reading for entertainment alone. It is a serious book that discusses a serious problem, but it is also extremely amusing, particularly the handy guide to a good score on personality tests included as an appendix. For best results, says Mr. Whyte, the testee should repeat to himself such sentences as: "I like things pretty well the way they are." "I love my wife and children, but I don't let them get in the way of company work." "I don't care for books or music much."

PR programs that clicked

PUBLIC RELATIONS IDEAS IN ACTION *by Allen H. Center. McGraw-Hill Book Co., Inc., 330 West 42nd Street, New York, 327 pages, $5.*

This is a casebook of public relations programs undertaken in response to specific problems or merely for promotion of greater sales volume. It tells, for example, how Bausch & Lomb popularized the idea that men do make passes at girls who wear glasses; how the Galvanized Ware Manufacturers Council made whole communities garbage-can-conscious; and how the Pan-American Coffee Bureau promoted the coffee-break. Stories deal with programs aimed at employees, investors, and the local plant community, as well as with those pointed toward the general public.

The "foreseeable" future

AMERICA'S NEXT TWENTY YEARS *by Peter F. Drucker. Harper & Brothers, 49 East 33rd Street, New York, 114 pages, $2.75.*

Mr. Drucker is a sober-minded prophet whose forecasts are based on such factual data as population statistics and the report of the Paley Commission on U.S. raw-material resources. His predictions are, therefore, worth considering. Among them are:

The next depression is unlikely to be characterized by mass unemployment. Inflation is the continuing danger.

Unions will decline unless they can organize salaried workers successfully, since larger and larger proportions of the population are likely to be wearing white collars.

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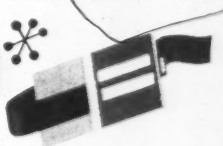

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ly so great and so new that they will force drastic changes in political alignments. The Republicans, with their vulnerability to futile nostalgia for a past that never was, and the Democrats, with their almost obsessive fear of depression unemployment, seem equally impervious to the future. Yet the very fact that the two Congressional parties are so evenly balanced in popular appeal suggests that the first to produce imaginative, bold, and realistic economic leadership might thereby gain a twenty-year ascendency."

ABC's of IDP

ESTABLISHING AN INTEGRATED DATA-PROCESSING SYSTEM, *Special Report No. 11, American Management Association, 1515 Broadway, New York, 183 pages, $4.50 (AMA members, $3.50).*

Most of this booklet is based on material originally prepared for an AMA orientation seminar on the subject. It covers such topics as making an IDP survey, machines available, cost factors, installation process, and choosing the IDP staff. It also includes short case studies by companies that have already installed IDP systems.

Writing it up

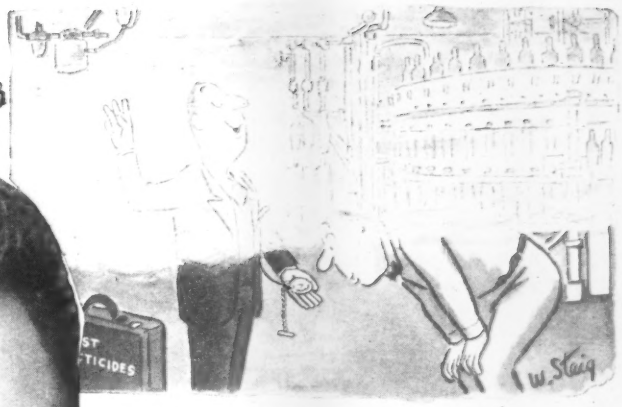
COMMUNICATION THROUGH REPORTS *by Paul Douglass, Prentice-Hall, Inc., Englewood Cliffs, N. J., 410 pages, $5.95.*

Many executives find writing reports on what they have done or on what they propose to do more arduous than the jobs themselves. Mr. Douglass comes to the rescue with a complete textbook on the subject, including practice problems and suggested collateral reading.

Acting it out

SUPERVISORY AND EXECUTIVE DEVELOPMENT: A MANUAL FOR ROLE-PLAYING *by Norman R. F. Maier, Allen R. Solem, and Ayesha A. Maier, John Wiley & Sons, Inc., 440 Fourth Avenue, New York, 330 pages, $6.50.*

Role playing—extemporaneous acting out of case problems in human relations—is now a recognized technique of supervisory training. Often a supervisor will be asked to bring a problem encountered on the job to the training conference and act it out with his colleagues. But, say the authors, the company situation may be too emotionally charged for successful use by beginners; therefore



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Fifty Years of Leadership in Mechanized Handling

they present a series of 20 specific cases for anywhere from two to thirteen players, and indicate the attitude each is to take.

The introduction describes the technique, examining such factors as group size and the props necessary for successful role playing.

Playing the market

YOUR INVESTMENTS *by Leo Barnes. American Research Council, 2 East Avenue, Larchmont, N.Y., 144 pages, $3.*

This 1957 edition of an annual guide adds a new feature: sample portfolios made up with a view to various objectives: safety, high income, tax shelter, and so on.

The book itself is composed of text describing various types of stock and bond investments, and the advantages and disadvantages of each, plus innumerable checklists of stocks. Some examples of the latter are: companies that boost dividends regularly, corporations with relatively low labor costs, possible growth companies of tomorrow, stocks the experts like. An index makes it possible to trace any stock through all the lists it appears on.

Management math

INTRODUCTION TO OPERATIONS RESEARCH *by C. West Churchman, Russell L. Ackoff, and E. Leonard Arnoff. John Wiley & Sons, 440 Fourth Avenue, New York, 645 pages, $12.*

This book is about halfway between the simplified expositions of operations research and the texts designed for mathematicians. The aim was, the authors say, to provide prospective "consumers" of O.R. with a survey of the field and potential practitioners with a basis for understanding the possibilities and procedures. They have been, perhaps, more successful in meeting the latter goal than in achieving the former, since the book is not particularly easy reading, and parts of it even require some knowledge of calculus. The nonmathematical reader who is willing to concentrate can probably follow most of it, however; and since the emphasis is on industrial applications, even the skimmer can get some idea of the possibilities of the technique in solving management problems. The text is based on lecture material for the "Short Course in Operations Research" offered annually at Case Institute of Technology.

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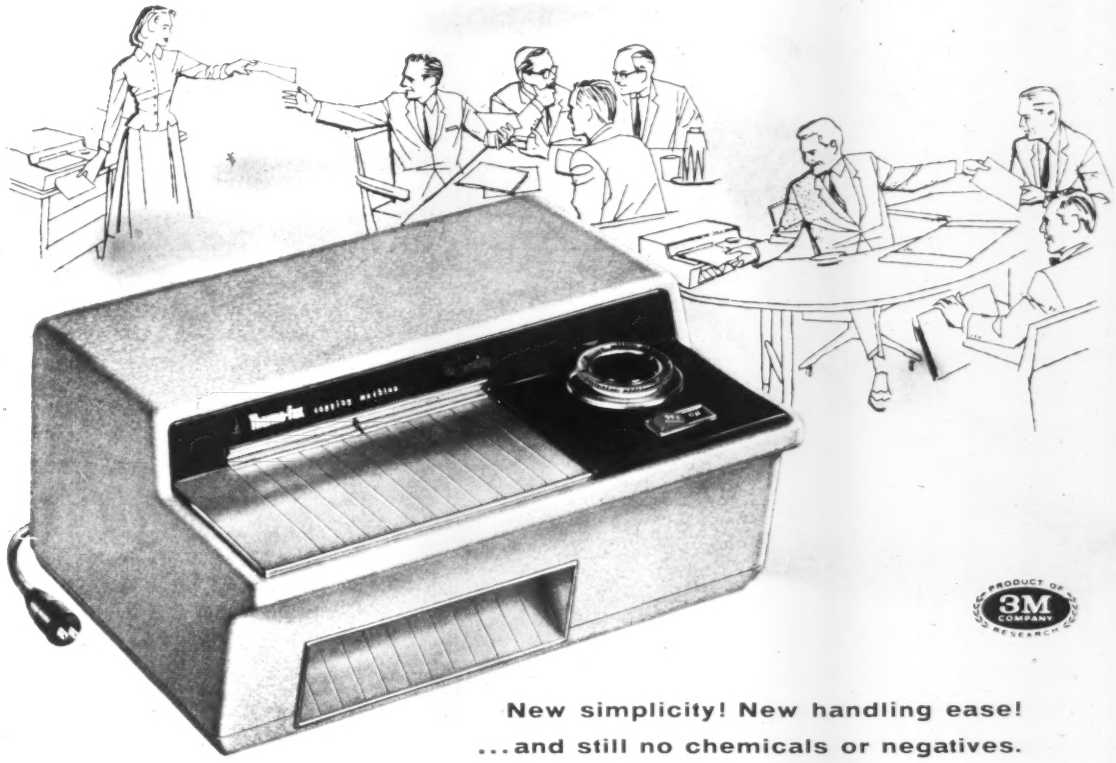

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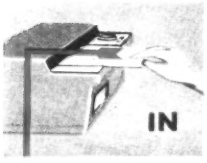

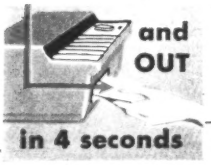

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PATTERNS IN TOP MANAGEMENT PAY

What are top executives earning compared to their presidents? Who makes more—the No. 1 man in marketing or manufacturing? How much more? Here is an exclusive story on specific patterns in management pay based on a survey covering 28,000 high-level executives in more than 3,300 companies.

GROVER AMEN

THE AVERAGE RATE of executive compensation has increased 20 per cent over the past five years. Corporate sales have risen 45 per cent in the same period, while profits have increased 24.3 per cent. In 1955, for the first time in recent years, the percentage increase in top executive pay equaled that of production workers—5.9 per cent.

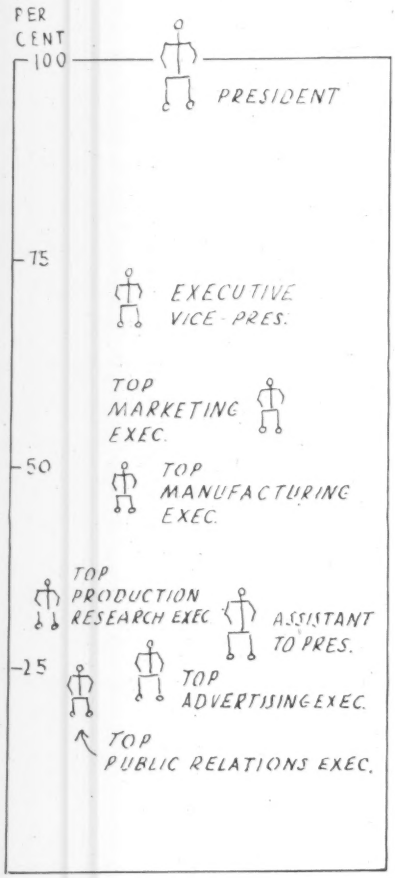
These are some of the over-all trends emerging from an extensive survey recently conducted by the Executive Compensation Service of the American Management Association.

In the light of these general increases, an interesting question is: Have any specific and constant patterns emerged? For instance, do the salaries of executive vice presidents bear a constant relationship to those of their presidents? Or are there too many variables working against any meaningful pattern?

The answer to this question is surprisingly definite and concrete, according to Dean H. Rosensteel, director of the AMA service, which in 1956 surveyed more than 3,300 companies and 28,000 executives: The relationship between the compensation of different top executives has been relatively constant, percentage-wise, over the past five years—despite the many variables. And the company size affects percentage relationships only to a small extent—though it has, of course, a very marked influence on the actual amounts. It must be stressed, however, that such percentages are only averages, and the actual responsibilities denoted by similar executive titles vary widely from company to company. Figures also refer to *total compensation*—salaries, bonuses, retirement contributions, and so forth—not just to salaries alone.

THE EXECUTIVE PAY SCALE

This chart represents a rough picture of where typical top executive jobs fall on a pay scale based on the president's earnings. The percentage averages are affected only slightly by changes in the size of the company.

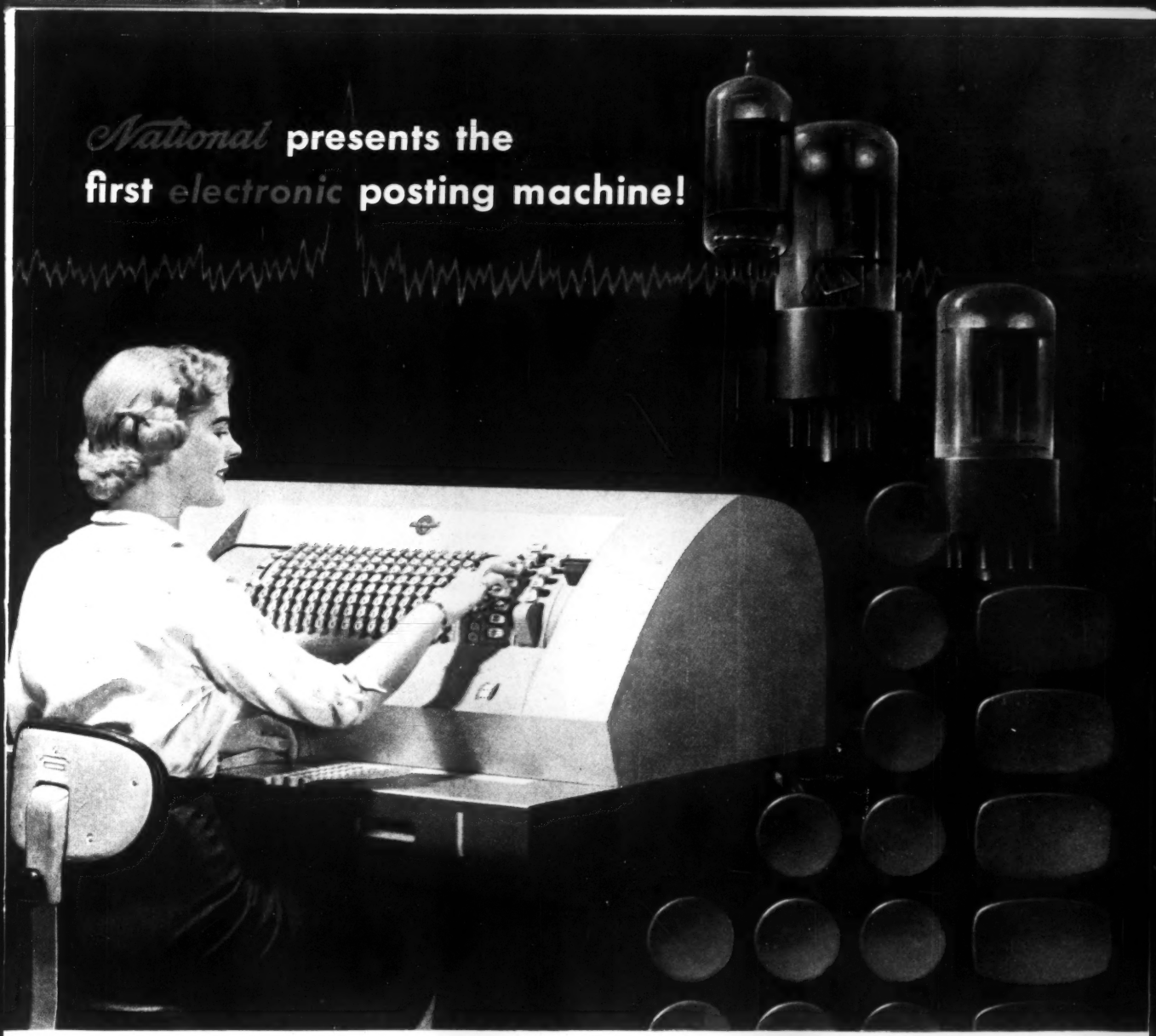


Placing the president's pay at the top of the scale as 100 per cent, we find that both the chairman of the board and the executive vice president, or his equivalent, tend to take in roughly 30 per cent less—and the chairman's pay runs a few percentage points higher than the executive vice president's. This percentage is almost uniform for both jobs regardless of company size, with one marked exception: In the larger companies, those whose annual sales exceed $100 million, the chairman nets only 9 per cent less than the president. This average is strongly influenced by cases where the chairman is chief executive officer and, as such, receives higher pay than his president. This is the largest percentage difference in pay for the same job resulting from company size.

In most cases the percentage figure for the same job runs somewhat lower in the larger companies because of the sharp increase in the base—the president's pay. In companies with over $10 million in sales but less than $100 million, percentages usually differ by only a few points.

The top marketing executive, at about the 60 per cent mark, is still kingpin in the group just below the three top men, with the top finance man runner-up. The manufacturing executive is third—close to the 50 per cent mark.

The largest number of high-rank-



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ing executives are earning about 30–40 per cent of their president's pay. This group consists of the general sales manager, top men in production research, legal matters, and engineering, and the treasurer, controller, secretary, and assistant to the president.

The executives of functions at the bottom of the scale average about 25 per cent of their president's pay, and almost none earns less than one-fifth. This group is made up of top executives in the following areas: industrial and public relations, advertising and purchasing. It should be stressed again that these are average figures, and it is quite conceivable, for instance, that in a company concentrating on a publicity program the top PR man's percentage would be correspondingly higher.

Some Actual Figures

As an indication of how the actual figures—as opposed to the percentages—vary according to company size, a spot check of survey results shows these sample variations:

Sales (in million $)	Company A 7	Company B 70	Company C 139
Number of Employees	750	5,000	8,500
President's Salary	$35,000	$87,000	$106,000
Secretary's Salary	$13,500	$26,000	$ 29,000

Thus, in the largest company above, the president's pay is more than triple the pay of the president in the smallest company, while the company secretary's is more than double.

Industry Variations

In general, the strongest factors determining the average *levels* of top management compensation are the size of the company and the industry. The survey reveals a consistent pattern, the actual level of compensation increasing with sales volume and larger responsibilities. Also, for a given sales volume, there are variations depending on the complexities of the management problems. Thus the larger utilities pay more than the smaller utilities for comparable functions; but all utilities pay less for the same functions than companies of equivalent size in manufacturing industries that demand a high degree of research and development.

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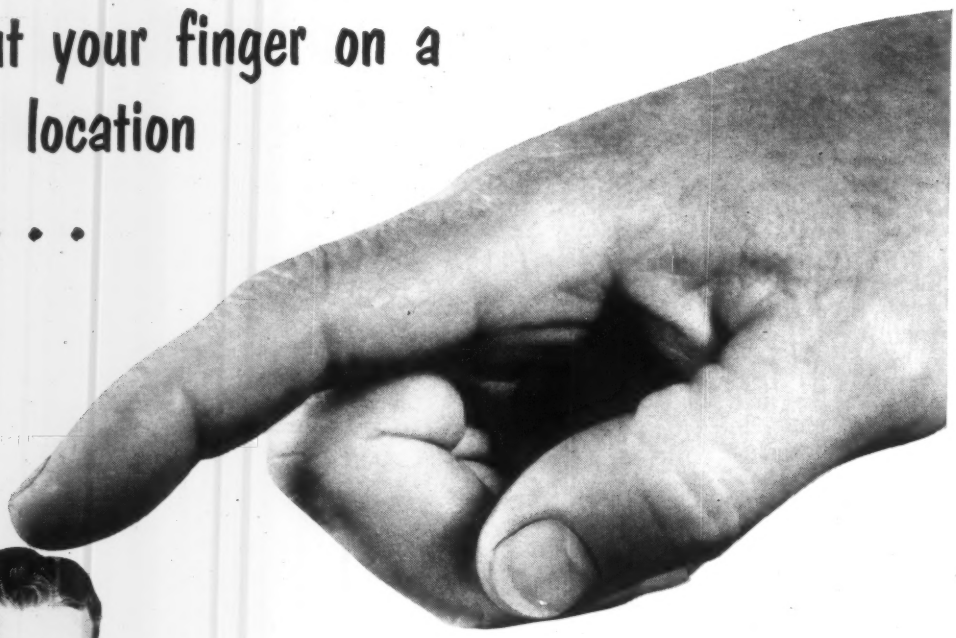
PEERLESS

How to put your finger on a good plant location specialist . . .



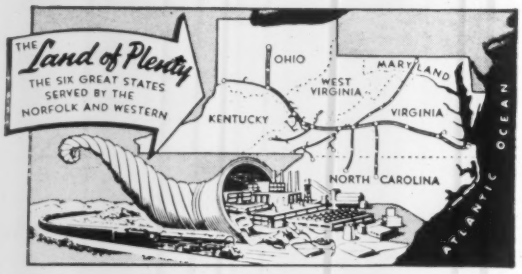
Since nobody builds plants out of petty cash or puts the roof on overnight, you want a man who knows as much about plant location as your doctor knows about medicine or your attorney about law.

You want a man who has the facilities of a plant location team with many years of sound experience . . . a team with an outstanding record for *showing the way* to other manufacturers . . . a team which, individually and collectively, knows its business.

You want a man you "don't have to draw a picture for . . . who will *grasp* your problem, know what you want, why you want it, and where to find it."

You want a man who knows his territory like you know your front yard. You want a man who is not the high-pressure type, who goes about your business quietly and in confidence, who is enthusiastic but respects only facts . . . a man who will work for you without obligation.

Where can you put your finger on this man and his team? It's simple.



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MIND READING IN THE SUPERMARKET

ALSO: ***How an industry-wide promotion campaign is focused on the point of consumer contact; new light on the premium craze***

ONCE SHE STEPS inside a supermarket, the average housewife becomes as impulsive as a tot in Disneyland. Researchers have discovered that more than half of all supermarket purchases are made on the spur of the moment. And the spikes in the spur are the packages the products wear.

To dress its products properly for the marketplace, which is becoming increasingly self-service, industry will probably spend about $12 billion this year. To make sure that these dollars do their full share, industry is turning increasingly to the researcher-in-depth to probe the public psyche about packaging.

The gist of a just-completed study is that packages can strike hidden sore spots in shoppers and react poorly on the sales of a product. To uncover these buried reactions, of which the shoppers themselves are usually not even aware, Dr. Ernest Dichter, director of the Institute for Motivational Research, interviewed in depth scores of shoppers in a new study for the Paraffined Carton Research Council.

Here's how this new research technique works:

After the shopper selects the package, he or she is interviewed at length by a psychologist on reactions to it and to the rejected package of the same brand. There are six steps in the interview:

1. *Free association.* The shopper is asked to say anything and everything that pops into his mind when looking at the packages.

2. *Story.* The psychologist asks the shopper to make up a story about the package. Dr. Dichter says that such a third-person story permits the shopper to express his true feelings without fear of offending anyone.

3. *Color.* The psychologist doesn't ask if the customer likes the color of the package, but instead says, "How do the colors make you feel?"

4. *Person.* To study the package's "personality," the psychologist asks, "When you look at this box, what kind of person are you reminded of?" In a study of reactions to a deodorant package, it was discovered that it impressed shoppers as feminine, yet the product had been aimed at the male market.

5. *Slogan.* The psychologist probes for all associations that come to mind on seeing the slogan on the box.

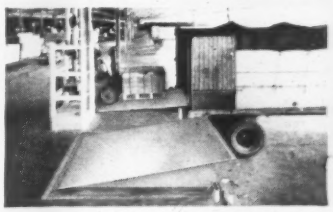
6. *Choice imputations.* The shopper is asked how he thinks others will react to the package. Women, for example, are asked which box they think would most likely be chosen by a man, a boy, or a girl.

This sort of "skulldiggery" can come up with some surprising results. For example, in studying margarine packages Dr. Dichter found that shoppers reacted favorably when the name of the brand was printed against the background of a green leaf while the margarine itself was represented as the disk of a daisy. This created an impression of naturalness, certainly desirable for the product.

However, consumers turned away from another brand that showed three pats of margarine encased in a cube of ice. Without putting their reactions into words, they had associated the ice cube with a test tube, and this evoked fear of harmful chemicals.

Dr. Dichter rates motivation research much higher than ordinary opinion research for discovering consumer preferences. He describes a packaging test in which a large number of consumers were simply asked for their opinions of three different package designs.

MODERN PLANTS NEED MODERN DOCKS



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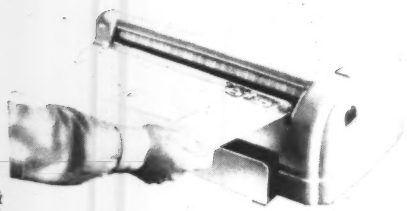

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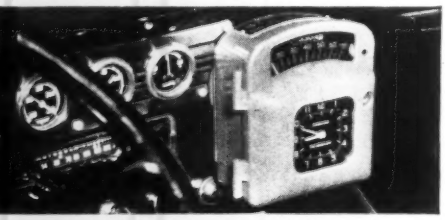

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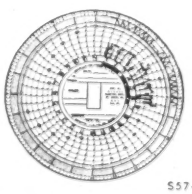

S57-7

The ornate design was picked by 62 per cent; the less embellished one by 25 per cent, and the simplest design by 12 per cent. A sizable sample of consumers had spoken, and it seemed like the go-ahead signal for the ornate design.

However, in an actual supermarket situation 72 per cent bought the package with the simplest design. Since a shopper's answer to a direct question may differ from his real feelings, there is an obvious need for sub-surface probing, according to Dr. Dichter and other proponents of motivation research.

For a free copy of this new study write to the Paraffined Carton Research Council, 111 West Washington St., Chicago 2.

Supple markets

One of the focal points of burgeoning suburbia—the supermarket—is becoming more "super" every day. A new survey by the Super Market Institute of a significant sample of the 1,500 new supermarkets started in 1956 indicates that they are increasingly becoming a latter-day type of general store, thus providing an economical outlet for many nonfood products. The new stores expect to get 6 per cent of their sales volume from nonfood departments. And total sales of nonfood items are higher than this if detergents, soaps, paper products, and similar items found in the grocery departments are taken into account.

Among the most frequently reported new nonfood departments were flowers, hardware, toys, and even pet shops. Many new supermarkets are installing snack bars, a tribute to the mouth-watering powers of modern packaging, no doubt.

Fair shares

When you launch a new product, how big a share of the market should you expect to get? Of course there are no inflexible ratios available; it depends entirely on the nature of the market and the kind of product you're selling.

To compile a rough rule of thumb, Richard Manville, president of Richard Manville Research, Inc., New York, has been gathering data on products that are market leaders. He points out that the leading toothpaste has from 20 to 30 per cent of

the market, and the leading lipstick accounts for from 25 to 30 per cent of its market. The top home permanent gets around 50 per cent, while the leading liquid shampoo takes 25 per cent, and the best-selling headache remedy gets about 30 per cent. The largest furniture maker has 8 per cent, and the leading producer of automatic coffee appliances has carved out 30 per cent. Mr. Manville points out that this latter figure can be considered ideal and is about the best a company can hope to attain.

To plug the gap

A live-wire campaign has been under way for several months to make the American public aware of the need for proper electrical circuits in their homes so as to "live better electrically." This multi-million dollar promotion has been supported by an impressive cross-section of American business and industry, including utilities, electrical equipment manufacturers, and their major suppliers.

According to Ed George, vice president of Detroit Edison and chairman of Edison Electric Institute's Wiring Promotion Committee, the promotion has a dual purpose. "Of course, we want to make the public aware of the need for full 'housepower' in the home," he said. "But we also want to make the thousands of electrical contractors across the country aware of the tremendous business potential that modernized wiring represents."

The program aims at doing more than merely creating an interest on the part of electrical contractors. It helps them do something about it and increase their own volume through a specially designed sales training course.

Prepared by the Porter Henry Company of New York for the Edison Electric Institute and the National Electrical Contractors Association, the six-meeting course stresses how to sell the benefits of up-to-date wiring.

More than eighty courses have already been purchased for presentation by utilities and others. The meeting kit includes the conference leader's manual, slides, recordings, flip charts, and pocket-sized booklets summarizing the significant selling points. The hit of the entire course is a visual sales presentation for use by the individual contractors.

Frank Kitzmiller, housepower pro-

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Whether your interest is continuous or parts production, Pratt & Whitney Automation Gaging can play an important role in improving your product quality and reducing your unit costs by increasing your units per production hour.

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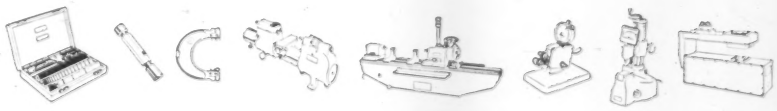

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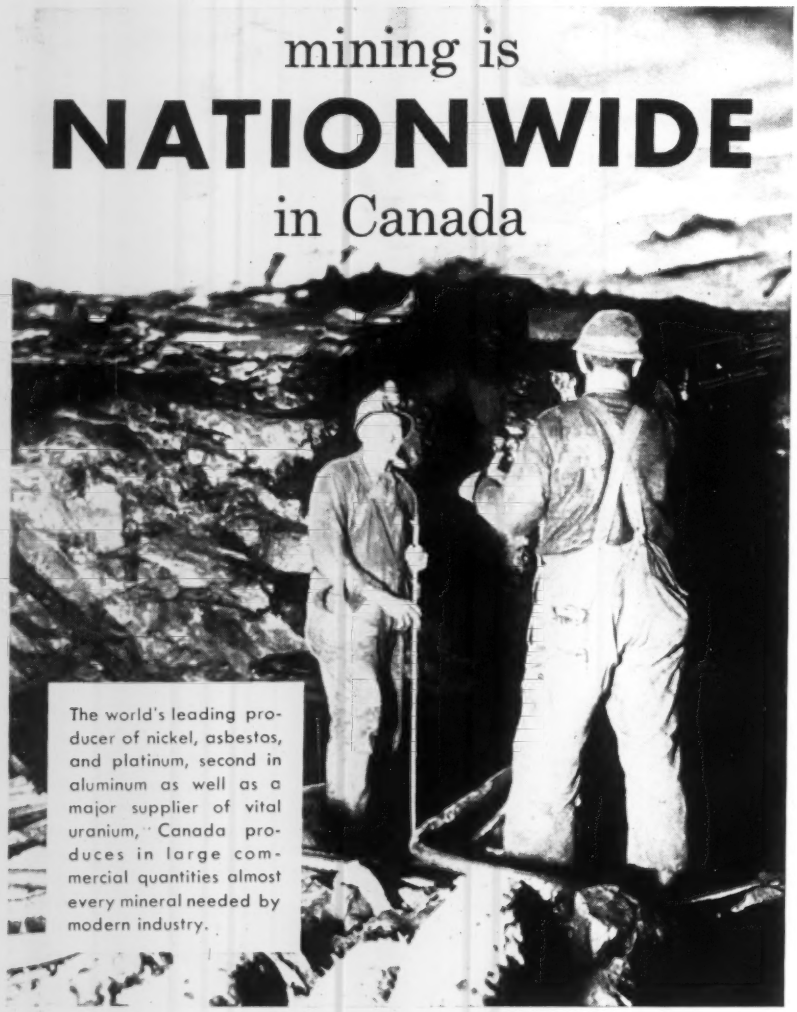

The world's leading producer of nickel, asbestos, and platinum, second in aluminum as well as a major supplier of vital uranium, Canada produces in large commercial quantities almost every mineral needed by modern industry.

...so are the facilities of Canada's largest bank

Branches of the Royal Bank, over 800 of them, cover Canada coast to coast. Each branch is a useful point of business contact, its manager thoroughly familiar with business and industry in the area he serves.

This widespread network enables the "Royal" to extend to you a prompt, well-informed and efficient service that goes far beyond the realm of routine banking.

When you deal with the "Royal" you are dealing with Canada's largest bank, fourth in North America; one of the great international banking houses of the world.

THE ROYAL BANK OF CANADA

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Total Assets Exceed 3½ Billion Dollars

gram manager of the Edison Electric Institute feels that the idea of sales training to backstop an industry-wide promotion fills an important and frequently neglected need. "Too often," he says, "a soundly planned promotion fails to get off the ground because no provision is made to reinforce it with a sales effort at the consumer level. We tried to cover that aspect, and results so far indicate we're on the right track."

Urge to splurge

The giveaway mood has suffused the television networks. But much more spectacular in terms of volume is the mountain of money business will spend this year on premiums—$1.5 billion.

A premium is any article of merchandise given away or sold at a reduced cost as an incentive to extra purchases. This would include the nylon watchband that goes along "free" with the purchase of a razor and the color TV set offered in sales contests to company salesmen. The most spectacular rise in the past few years has occurred in one particular type of premium—the trading stamp. But the entire field has been expanding as marketers search for new ways to boost business and confound competitors.

But despite the heavy spending for premiums, there are many serious gaps in management's knowledge about this marketing tool. To close these gaps and enable business to make more effective use of premiums, the Premium Advertising Association of America commissioned the first thoroughgoing market study of the subject. Conducted by Dr. Arnold Corbin of New York University, the study surveyed the practices of about 3,000 premium users, suppliers, and advertising agencies.

The result is a 32-page booklet that pinpoints the uses of premiums and shows what manufacturers, wholesalers, distributors, retailers, and others gained by putting out a sprat to catch a salmon. Copies are available from the PAAA, 608 Fifth Ave., New York 20. —T. K.

● Did you know that the magazine *Law and Order*, which goes to 5,600 police chiefs, is published by William C. Copp & Associates? Or that the largest dealer in defaulted Russian bonds is Carl Marks & Co.?

Here's BIG BUSINESS Bookkeeping . . .

The New MONROE *President*

With its stunning new President model, Monroe introduces more than a new accounting machine . . . Monroe establishes an entirely new ratio between what you pay and what you get in machine accounting. Now, for the first time, *any* business can enjoy all the benefits of *big business bookkeeping* at a price actually hundreds of dollars less than before! And job changing flexibility is built right into every model in the President line. With the flick of a knob accounts receivable, payroll, cost control, accounts payable . . . all become mechanized operations. Look at the price tag on this machine. Then put your own price tag on what machine accounting can do for you. Speed receivables by getting statements out faster. Build prestige with neat looking records. Put credit data at your fingertips. Control your work so it flows easily and always accurately. Write or telephone Monroe Calculating Machine Company, Inc. General offices: Orange, N. J. Offices throughout the world.

See the MAN from MONROE

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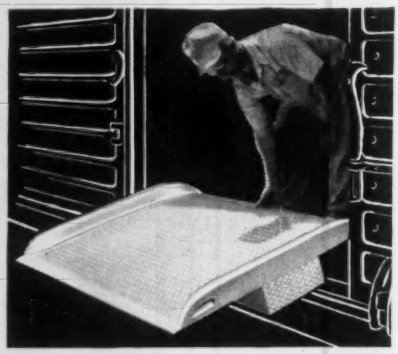

MAN PUTTING DOWN A SOUND INVESTMENT

This company has made a wise investment—one which will pay dividends year after year. The man above is dropping a Magliner magnesium dock board in place on the company's dock. This new Magliner will speed loading . . get more out of power trucks and other loading equipment . . . keep costs down! Made of light, strong magnesium, it will protect men, loads and equipment against accidents and costly damage. Magliners are low in initial cost—and because they provide dependable, long-life service with less maintenance they give you greater economy ALL ways! Find out today how Magliner dock boards can cut costs in your operation. **Write for Bulletin DB-204.**

MAGLINE INC.
Pinconning, Michigan
P.O. Box 15

MagLiner MAGNESIUM **DOCK BOARDS**

Canadian Factory: Magline of Canada Ltd., Renfrew, Ontario

wisdom comes with age

THE OLDER WE GROW, the more we know. This is not only true of people, but of companies, too . . . for a company is only as wise as the knowledge of its combined staff.

FOR 60 YEARS, PANAMA-BEAVER has matured steadily in its program to provide an "easier office-worker life." Since 1896, the company has learned to anticipate the needs of the commercial world before they arose. Among the first to recognize the important role of Vision-Engineered products, PANAMA-BEAVER's research department developed the easy-on-the-eyes Hypoint colored carbon papers plus Lustra Colorful Inked Typewriter Ribbons—especially created to harmonize with all paper stocks and letterheads. Another achievement—the Eyesaver, Parma Pearl and the NEW Ebony Unimasters (for spirit duplicating) with tinted jackets to avoid glare, relax the eyes, relieve harsh contrast and permit faster work.

EXCITING THINGS have already been charted for PANAMA-BEAVER's next 60 years . . . as you will find out when you call your PANAMA-BEAVER man, "always a live wire!"

PANAMA-BEAVER Ribbons and Carbons
Coast to Coast Distribution

Since 1896—"The LINE that can't be matched."
MANIFOLD SUPPLIES CO.
188 Third Ave., Brooklyn 17, N. Y.

ANTITRUST LOOKS AT MERGERS

continued from page 40

tended to reach horizontal, vertical, and conglomerate mergers having a potentially adverse effect on competition. It defined horizontal acquisitions as those in which the firms involved "are engaged in roughly similar lines of endeavor." The same Report defined vertical acquisitions as those in which the purchase "represents a movement either backward from or forward towards the ultimate consumer", and conglomerates as those in which there is "no discernible relationship in the nature of the business" of the two companies.

As of the present time, there have been few court interpretations of the language of amended Section 7. None of the cases instituted by the Department of Justice has reached decision on the merits. Such matters as the degree and type of substantiality required to bring the Act into play, and the meaning of such language as "section of the country" and "line of commerce" or relevant market, have received some attention in specific cases, but the legal precedents are still too scarce to hazard precise definitions of these terms.

Merger Clearance Program

As an aid to the business community, the Department has a merger clearance program. A corporation contemplating merger with another may voluntarily submit facts to us, on a confidential basis, with a request for a statement whether or not the Department would undertake to withhold proceedings if the merger should proceed. In making its evaluation, the Department ordinarily relies solely on the information submitted by the applicants and on such other material as may be available in governmental files; it does not make a full field investigation.

The Department considers, among other things, such matters as the products made by the acquiring and acquired companies, the market in which each sells, the classes of customers to which they sell, the total assets and total net sales of each, the number and size of other companies in the industry, the relative size of the acquired and acquiring companies and their combined strength, the diversification of these companies and of others in the industry, the extent of concentration in the indus-

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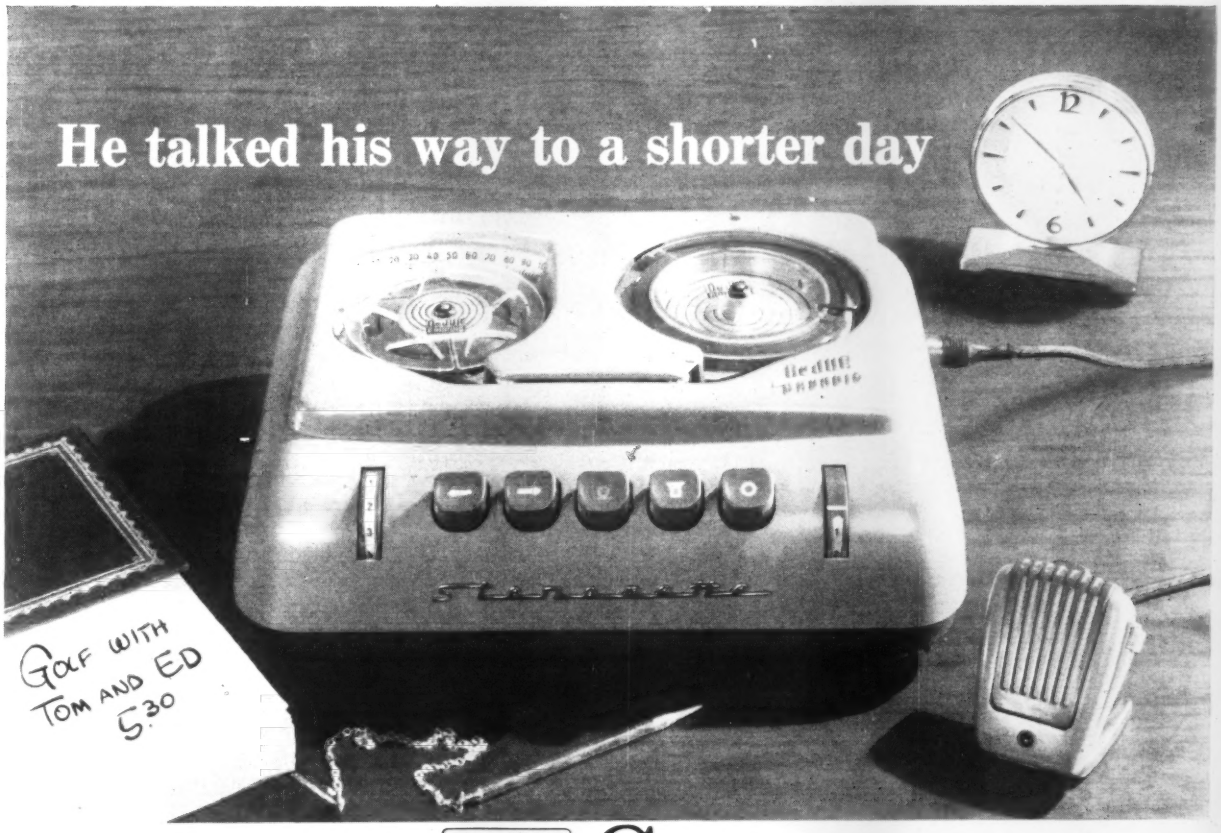

...own the DeJUR GRUNDIG Stenorette

Electronic Dictating–Transcribing Miracle .. $179.50*

Now, for less than half the price of other major dictating machines you can own the first really new dictating machine in 18 years! Despite its amazingly low price, the world-famous Stenorette does everything the highest-priced units do–and more! Ideal for conference, and for trips–Use Stenorette in a *moving car, plane or train.* Only 11 pounds, 10 ounces.

Revolutionary magnetic tape recording. Imagine! You'll dictate for 30 minutes onto one magnetic tape–the finest medium for recording the human voice. Erase automatically by recording right over words to be corrected... *without ever touching the machine.* Tapes can be re-used indefinitely... so your Stenorette and several reels of tape can be your *final cost for years of carefree, push-button dictation.*

Your Secretary can transcribe from your machine. One Stenorette can serve for *both dictating and transcribing.* Accessories are designed for convenience and comfort of secretaries. Foolproof "Index Dial" and log pad makes transcription easiest of all. Shout–whisper–hold "mike" close or at arm's length..."playback" is always clear and natural thanks to Automatic Voice Control.

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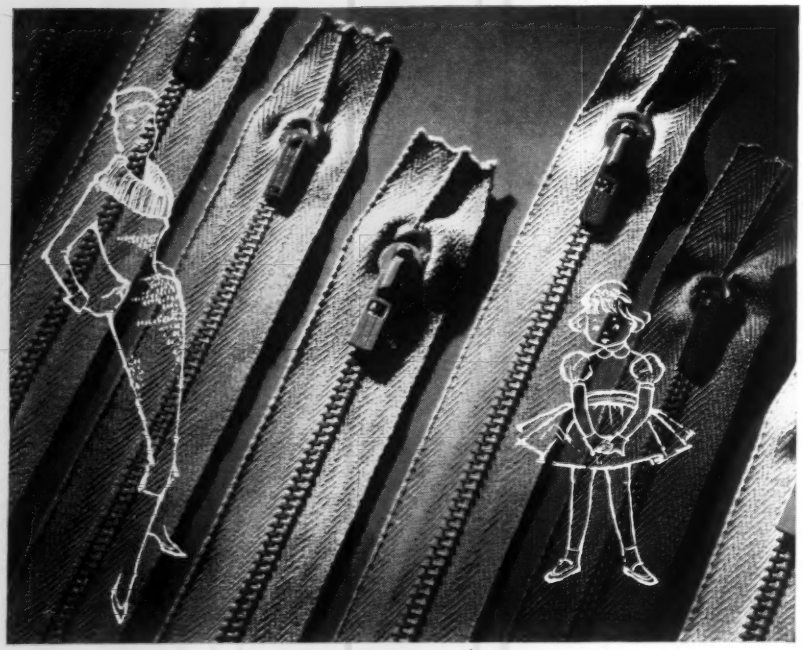


Talon fashion-hued fasteners flash through UDYLITE machine at a mile-an-hour clip

When High Fashion called for color in metal slide fasteners, Talon, Inc., the world's largest manufacturer of metal fasteners, consulted Udylite . . . and Udylite came up with the answer—a unique application of its Fully Automatic Plating Machine to anodize aluminum fastener parts, dye them and seal the color in—all in one operation! Now, smartly colored slide fasteners are flowing forth at the rate of 6000 feet per hour at Talon's Meadville, Pennsylvania, plant.

Udylite fully automatic machines are now being used to anodize a wide range of products—refrigerator trays, name plates, aircraft parts, automotive grilles, wheel covers, transmission cases—practically everything of aluminum that is anodized on a mass-production basis. Udylite machines will cut costs on every other treatment of aluminum—dye-anodizing, bright dipping, anodic etching, electropolishing and electroplating of course!

. . . whatever your product . . . whatever your metal finishing problem . . . it pays to consult Udylite.

THE Udylite CORPORATION DETROIT 11, MICHIGAN

World's Largest Plating Supplier

try, and the acquisition history of the companies. In the case of a vertical integration, in addition to the foregoing, the Department considers factors indicative of the probable effect of the merger on former customers or suppliers. For instance: What other outlets or sources of supply are available to former suppliers or customers? Will the integration give the combined operation an undue competitive advantage over others in the industry that are not integrated? What is the trend in the industry?

After evaluating all the information, the Department will either issue a letter of clearance or inform the applicants in writing that it cannot do so. In general, a clearance letter will state that, on the basis of the information submitted and the representations of the parties involved, the Department "does not presently intend to take action with respect to the proposed acquisition." It reserves the right to take action in the future if other evidence or subsequent developments should warrant it. If clearance is denied, the letter states that the Department "cannot undertake to withhold proceedings" if the merger is consummated.

Pending Legislation

Apart from voluntary submissions under the merger clearance program, the staff of the Antitrust Division learns of proposed or consummated mergers through published reports in trade journals, financial newspapers, and manuals of investment. If a limited investigation indicates that the merger may have adverse competitive effects, a more comprehensive analysis is made of information sought from the parties. Of course, if a merger receives no advance publicity, we may not learn of it until after it has been completed.

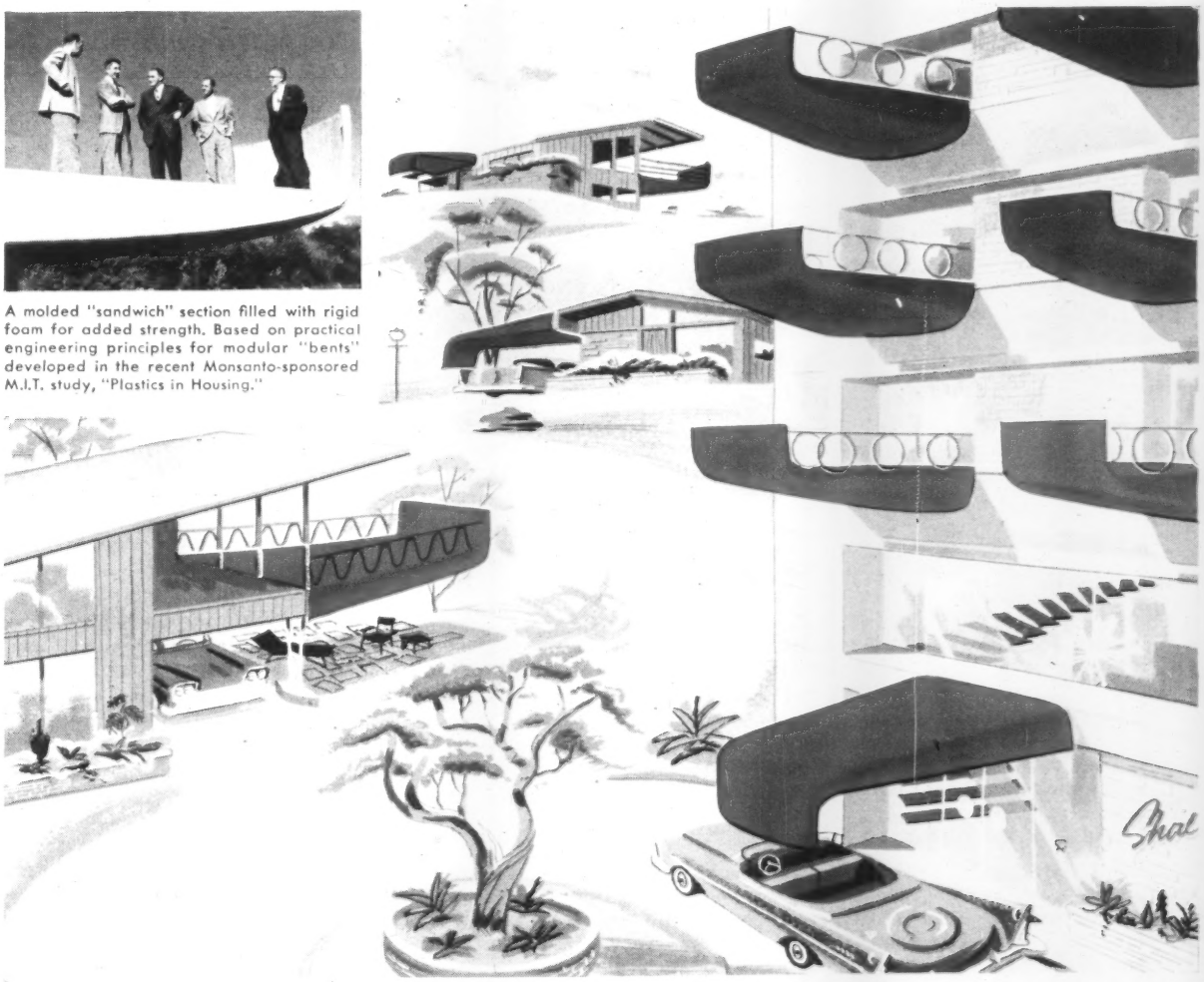
But the Department of Justice has recommended enactment of legislation that would require companies contemplating merger to notify us in advance.

A number of bills dealing with this subject are pending in Congress. While they differ in detail, in general they provide that if the combined capital, surplus, and undivided profits of the acquired and acquiring corporations are in excess of $10 million, the corporations shall not merge until a specified time (60 days in some of the bills) after notice to the Attorney General. This requires noti-

IDEAS for profits from Monsanto's "House of the Future"

Balconies and canopies of molded reinforced plastic

A molded "sandwich" section filled with rigid foam for added strength. Based on practical engineering principles for modular "bents" developed in the recent Monsanto-sponsored M.I.T. study, "Plastics in Housing."



Balconies, arcades, decorative *and* functional overhangs of striking beauty and simplicity . . . each in a single piece quickly fixed to the building as a pre-built unit. The material? The same used for military landing craft, punishment-taking truck bodies, and for 40,000 pleasure boats in 1956: *fibrous glass reinforced plastic.* Lighter than aluminum; higher tensile strength than steel; shatterproof; weather-resistant.

Qualified molders can make reinforced plastic balconies and canopies for you *today*—to your specification, in your choice of color. Even if you use as few as 24 units, the in-place cost of a molded roof or balcony should be *less* than any built-on-the-job construction. Here's an opportunity to pioneer . . . in design, in building.

MONSANTO CHEMICAL COMPANY
Organic Chemicals Division, Dept. RI-2A, St. Louis 1, Mo.

FOR NAMES *of qualified molders, write today to Monsanto—manufacturer of raw materials for reinforced plastic products.*

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NOW! A New Way to

OPEN THE VISE THAT'S SQUEEZING PROFITS!

If your manufactured item uses component parts from outside suppliers, you're engaged RIGHT NOW in a series of operations that are costing you important money. You have to receive those parts, perhaps assemble them into kits, certainly pre-package those kits or parts individually, and finally re-ship them to your distribution points.

Think of the time all this takes . . . the personnel, the equipment, the space, the mountains of paper work, the actual money tied up in both continuous, costly overhead and big capital investment.

But now you can achieve the same result, without any of the attendant headaches, at a pre-determined, controllable cost that's actually LOWER than your present cost for these operations.

Yes, you open the profit vise when you turn over your component parts packaging to Greene Packaging Industries, the world's largest contract packager. You take advantage of expert, experienced packaging know-how, benefit from the very latest packaging equipment, and maintain direct but simplified control of distribution. Yet, you actually SAVE on operating expense and still release for working capital the large amounts now tied up in these operations.

MAKE US PROVE IT! Ask us to show you how other leading firms — *including some of the biggest and best-known companies in the United States* — are using Greene Packaging Industries to improve their profit picture. Then let us show you how this same specialized service can go to work for *you* — to open the profit vise by doing a *faster, better job* for *less money.*

For preliminary details, please fill in and mail the coupon. No obligation, of course.

Greene **PACKAGING INDUSTRIES** *(Division of Greene Metal Products, Inc.)*
2222 South Michigan Avenue • Chicago 16, Illinois

We're tentatively interested in details of your parts packaging service.

☐ **Phone me for an appointment to discuss details.** ☐ **Send me a letter further describing your service.**

NAME _____

COMPANY _____

ADDRESS _____

CITY, ZONE, STATE _____

fication of mergers likely to be significant, yet avoids placing an unnecessary burden on smaller business men, whose mergers are less likely to produce adverse economic effects. There is also a requirement that, along with the notice, the merging corporations "shall set forth the names and addresses, nature of business, products or services sold or distributed, total assets, net sales, and trading areas of both the acquiring and acquired corporations." The parties may be required to furnish additional relevant information "within their knowledge or control," if requested within the notice period.

The bills provide for exemption from the notice requirements for certain commercial transactions not likely to have antitrust significance. These exemptions differ in detail in the various pending bills, but typical are provisions that the law shall not apply to stock acquisitions not exceeding 10 per cent of the voting rights, to stock or asset acquisitions not exceeding $2 million in value, to nonvoting security transactions, and so on.

All the bills provide for a penalty of $5,000 to $50,000, recoverable in a civil action by the Attorney General, for *wilful* failure to give notice or to furnish the required information. The provision for the element of wilful intent makes clear that purely inadvertent failure to notify or to furnish information will not be subject to punishment. Moreover, this is the only provision for enforcement con-

"There must be some way we could effect this merger without the Attorney General or anyone noticing."

Drawing by Whitney Darrow, Jr., © 1957 The New Yorker Magazine, Inc.

Making man the master of paperwork

As the business pace accelerates in this year of 1957, paperwork costs are multiplying even faster. The keen competition for clerical workers doesn't help the situation in any way. For some businesses, Underwood automation of paperwork has been the actual means of survival. For many others, the efficiency of Underwood systems has meant an improved profit picture through lower clerical costs, closer management control and improved service to customers. Let Underwood help put you on top of paperwork problems. Call your local Underwood showroom (see Yellow Pages), or write to Underwood Corporation, One Park Avenue, New York 16, N. Y.

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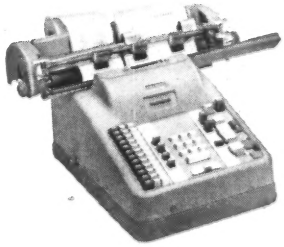
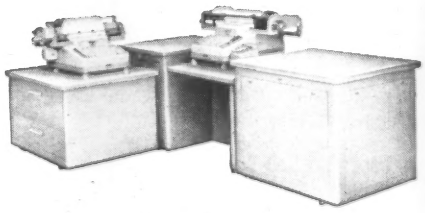
master-control systems



Post-Master, Sundstrand and Elliott-Fisher accounting machines



Elecom 50 electronic computer systems

Dataflo® processing systems

tained in the proposed legislation.

Another proposal that would assist effective enforcement of the antitrust laws has been labeled "civil investigative demand." It would enable the Attorney General to compel production of documents by corporations, partnerships, and associations—not by individuals—during the investigative or prefiling stage of civil proceedings. There is now no such power in the Department of Justice, though regulatory agencies of the Government possess it. Where criminal proceedings in antitrust matters are contemplated, the grand jury process is available to secure production of both documentary and oral evidence.

But the Department is frequently handicapped in obtaining evidence necessary for the institution of civil proceedings. Of course the Government may file a complaint and then rely on discovery processes to gather evidence to sustain the suit, but thorough investigation before suit is filed is certainly preferable. The civil investigative demand is particularly essential with respect to merger investigations, since Section 7 of the Clayton Act has no criminal sanctions and grand jury proceedings cannot be used to secure documents during investigations.

Two Recent Amendments

Enactment of these proposals, together with two recent amendments to the antitrust laws, should provide effective aids to the maintenance of a flexible economy, free from artificial restraints. One of the amendments, enacted in 1955, increased from $5,000 to $50,000 the maximum fine that may be imposed for violation of the Sherman Act. Under this provision a District Court has recently imposed fines of $30,000 on each of several defendants for a single offense under the Sherman Act. The other amendment gives the United States the right to recover damages for injuries it suffers as a result of antitrust violations. This new right permits the Government to seek redress for injuries it incurs in its business or proprietary capacity as a result of collusive bidding or other types of unreasonable restraints.

The antitrust laws are for the protection of the American people, the business community as well as all other groups in our society. It is our purpose to enforce these laws for the benefit of all.

TALK TO

The Toronto-Dominion Bank
if you plan a business expansion in Canada

Your business in Canada is well organized and off to the very best start when you use the services of The Toronto-Dominion Bank. "The Bank" can advise you on Canadian incorporation procedures, can help you in many ways to profit in Canada's growing markets.

The Toronto-Dominion Bank can help you find the ideal plant location, get you acquainted with the best distributors in any province, advise you on the habits and customs of Canadians all over the country.

With 470 branches, coast-to-coast, "The Bank" is a *part* of Canada—*every part* of it.

Take full advantage of the many business-building services of The Toronto-Dominion Bank. We're ready to go to work for you *today*.

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Write, call or wire Mr. F. G. Cleminson
Head Office, Toronto, Canada

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28 Broadway, New York 4, N. Y.

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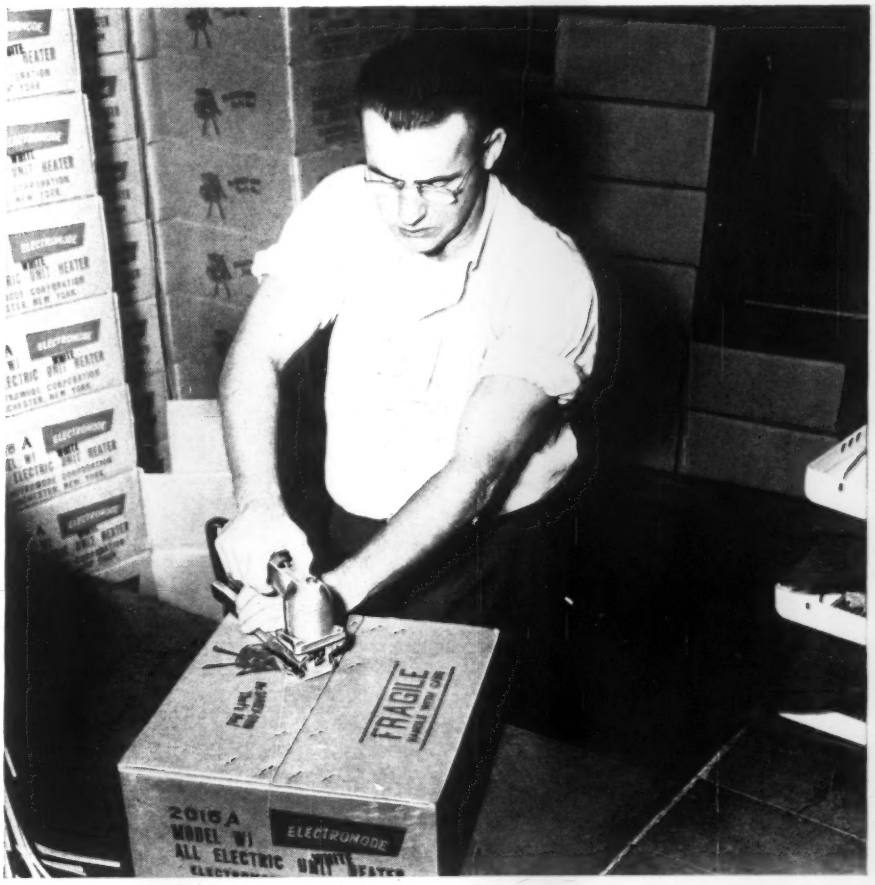

Bostitch D9AD Stapler *power drives* staple into carton flaps and *clinches from the outside*

"Stapling results in a 20% saving"

says PLANT SUPERINTENDENT

Plant superintendents are always looking for ways to cut costs. When a Bostitch Economy Man called at the plant where this photo was taken, a brief demonstration was enough to prove the advantages of a Bostitch air-driven stapler over gummed tape.

In practice, results are:

1. 20% saving in fastening time
2. Neater, cleaner package
3. More space left free for advertising and stenciling on container
4. Improved employee morale and efficiency

Call your nearest Bostitch Economy Man (375 of them in 123 cities) or mail coupon.

Fasten it better and faster with

BOSTITCH®
STAPLERS AND STAPLES

START SAVING NOW!

BOSTITCH, 665 Briggs Drive, East Greenwich, R. I.

☐ Send me a folder about D9AD Air Driven Stapler
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Automation of office paperwork is now a practical means of controlling the problem of excessive inventory.

Every *day*—instead of every *2 weeks*—you can have at your finger tips the figures showing "how much is where" . . . thus speeding deliveries, reducing shipping costs, tightening the whole sales operation.

Moore Business Forms (the largest company in its field) has developed procedures with Automated Data Processing—or ADP—which have proved of value to both small businesses and large.

ADP contributes importantly to profits . . . not only by cutting down on large inventories, but by speeding work, reducing errors, making new employees unnecessary as business expands, improving employee morale.

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Call the Moore man (he's in the telephone directory). Over 300 offices and factories across the U. S., Canada, Mexico, Caribbean and Central America. Or write Moore Business Forms, Inc., at Niagara Falls, N. Y., Denton, Texas, or Emeryville, Cal. No obligation, of course.

MOORE BUSINESS FORMS Inc

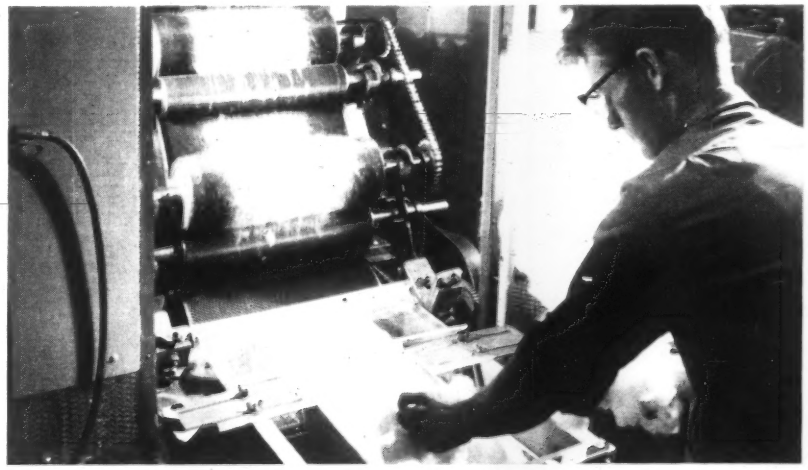
Synthetic papers and felts, weighty metals, new adhesives, bid for the tough jobs

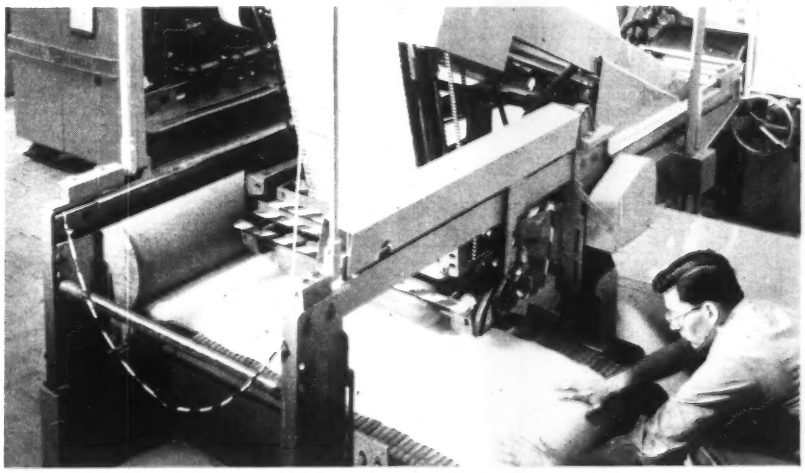
Paper was never like this

Could you use an acid-proof identification tag or punched card that could be routed through the shop with nary a care?

Is there a job in your plant or a place in your product for a paper-like material that has good electrical properties, retains its strength when wet, is dimensionally stable, and can be heat-sealed?

If so, take a look at the synthetic fiber papers and felts being developed by such companies as Du Pont, Riegel Paper, and American Felt.



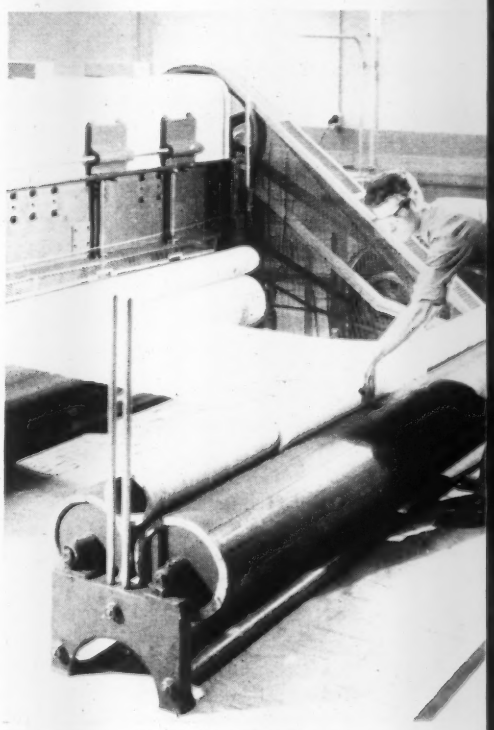


Synthetic felt production starts with carding operation (upper photograph). Then, carded web is lapped to form batt of desired weight. Pictures here were taken in new Du Pont lab.

Riegel, for instance, has a variety of 100 per cent synthetic fiber papers—nylon, Orlon, Dacron, and the like—and of synthetic fiber-cellulose blends. They might be used as packaging materials, map and chart papers, fillers, and fabric backings.

Synthetic felts made in American Felt's laboratories are being evaluated for use in gaskets and seals for high-temperature bearings as well as for the punched card mentioned above; and the company thinks one of its new *Feutron* felts may even prove to be "the first washable nonwoven fabric usable in suits."

In addition, Du Pont, which is testing all sorts of synthetic papers and



Needling operation interlocks fibers mechanically; shrinking process tightens bond.

Why warehouse after warehouse after warehouse is a

Office and warehouse in Butler building with attractive, architecturally-styled front. Side and back walls are metal, for future expansion.

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We don't mean to be pompous, but more Butler buildings are used for warehouses than any other metal building. Not the cheapest way to build — but the lowest cost way to build well.

Butler steel frames give you post-free interiors up to 100 feet wide. Trussfree gables permit stacking clear up to the roof peak. You get more usable space per dollar. Solid banks of overhead doors can be installed without special construction to support the roof. Protection? It couldn't be better. Fire-safe, maintenance-free Butler metal panels are die-formed. They nest together precisely — shield the contents like a one-piece metal shell. Good insulation is easy. Lighting and ventilation are ideal.

Add it up. It's the lowest-cost way to get a good warehouse. That's a lot to claim, we know, but your Butler Builder can prove it! Call him. He's listed in the Yellow Pages under "Buildings" or "Steel Buildings." Or write direct.

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felts in its new Industrial Products Research Laboratory (photographs below and on page 87), believes they'll find many jobs as wicking, sealing, lubricating, cushioning, and insulating materials.

Though both felts and papers are produced on standard equipment, developing them has not been a simple matter. Research has been under way for several years in Government as well as industrial laboratories. It has taken time to work out fiber combinations and select the best processing methods. Now, though, research programs are beginning to pay off—and it looks as though industry will soon have a new portfolio of specialty materials ready for use.

Better alloys to beat the heat

Need an alloy that will stand higher temperatures and provide greater strength, yet save on strategic materials? Take a look at this quartet:

Republic Steel Corporation has developed a "99 per cent native" steel alloy that is said to stand operating temperatures of 600° F or more, and to show no noticeable change on repeated heating and cooling from room temperature to 1,000° F. Nominal composition is 3 per cent nickel, 1.5 per cent chromium, 5 per cent molybdenum, balance iron.

Another new alloy developed to

Synthetic fiber paper is made in Du Pont Research Laboratory by running fiber slurry over filter screen (upper photograph), drawing off water. Then paper is dried and bonded under heat and pressure. In lower photograph, experimental sheet is removed from dryer.

Money and Time Saver—

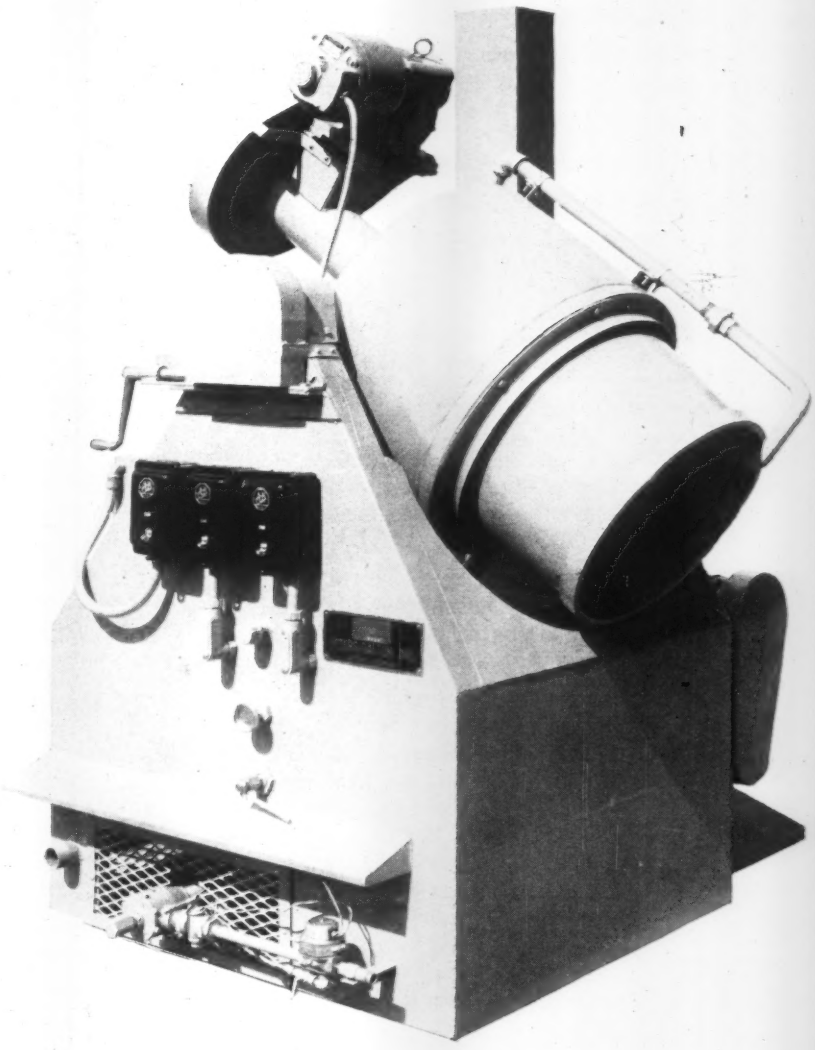
ROTARY DRUM TYPE POWER SPRAY WASHER

by PETERS-DALTON

thoroughly washes, rinses and dries SMALL PARTS

Many manufactured products require in their assembly components of small complex parts. Before their installation they must be thoroughly cleaned from dirt and chips following various machining operations. To do this best requires equipment designed, engineered and built for the job. The Small Parts Washer by P-D, shown here, is a real workhorse —and money saver. Depending upon part sizes and production requirements, it has a capacity for handling one to four cubic feet of work load per hour. Its 4-cycle operation includes: soak; heated wash rinse and heated blow-off . . . wash is heated at 160°-170° by means of indirect gas firing; hot combustion gases will be used for heated blow-off — plant hot water may be used for hot rinse. This Small Parts Washer was fabricated at the Peters-Dalton plant and delivered, ready to go into service.

The accumulated knowledge of more than 25 years of designing, engineering, fabricating and installing all types of finishing equipment, is available to you at P-D. Just write, wire or phone . . . we'll be glad to tell you more.



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beat the heat in jet engines—this one for structural components operating from 1,200° to 1,400° F—is General Electric's J1300. It, too, contains no cobalt or columbium and little nickel; and is said to have a high strength-weight ratio. GE's Metallurgical Department is producing it in both bars and sheets.

Aiming at the same temperature range, Westinghouse has modified its *Discalloy*, an iron-nickel-chromium alloy, with small additions of molybdenum, boron, and titanium, to produce a material that, it says, can resist stresses as high as 75,000 p.s.i. at temperatures to 1,200° F for 300 hours or more without breaking.

International Nickel Company, too, is improving one of its best nickel-iron-chromium alloys by adding titanium to give it even greater strength at elevated temperatures. The new formulation, *Incoloy-T*, is said to stand operating temperatures under load to 1,400° F and to show excellent oxidation resistance at temperatures as high as 1,600° F.

Materials in brief

Atom-swapping films—ion exchange resins that make it possible to remove unwanted elements from solutions and promote chemical reactions—are now available in membrane form from National Aluminate Corporation. Two types, one anionic and the other cationic, are made in several sizes and thicknesses, in widths up to 38 inches and "any convenient length." They have other uses as well. National Aluminate reports—they're static-free materials and can be used a battery separators.

Structural adhesives are becoming increasingly popular as new formulations prove their ability to take and hold a firm grip even at elevated temperatures. Narmco Resins & Coatings Company says the aircraft industry increased its use of structural adhesives more than 200 per cent last year, and other industries are following suit. Some of the newer adhesives, Narmco reports, can stand temperatures as high as 800° F under stress. One promising new application: fabrication of lightweight paneling for new industrial and commercial buildings (see page 46).

—A.R.G.

more news on page 92

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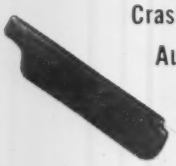

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How you can use

INDUSTRY'S HEAVYWEIGHT CHAMP

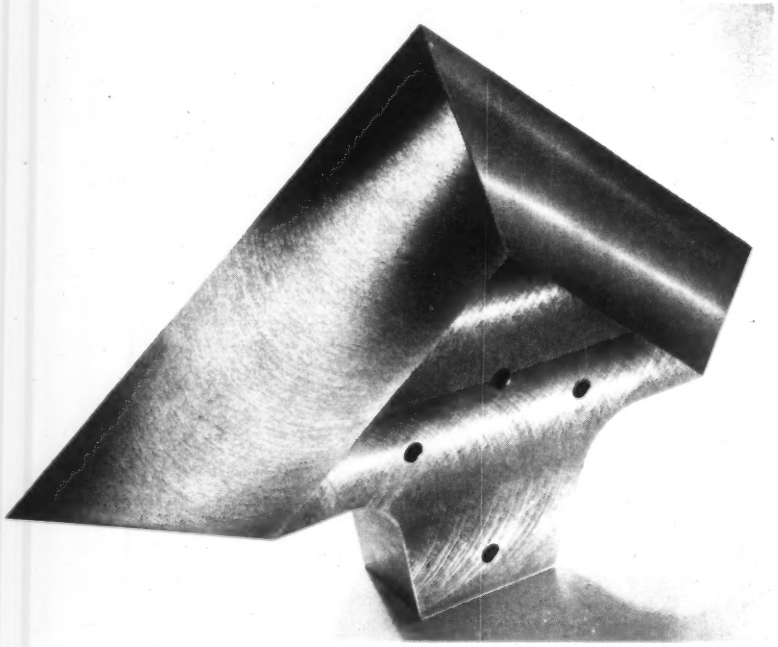
IF you wear a self-winding wrist watch, or have flown in a plane, or used a gyroscope, the chances are you've already met the high-density alloy known as *heavy metal*. You might have met it, too, when you had your last X-ray.

For a good many years heavy metal has been doing a quiet but effective job in a variety of products. It offers high strength and dimensional stability, packs a lot of weight in a small space, and gives protection against dangerous radiation.

Now, it's helping to solve tough design problems in such new fields as atomic energy and electronics.

Actually, heavy metal is not one alloy, but a series, centering around a basic composition of 90 per cent tungsten, 6 per cent nickel, and 4 per cent copper. It is fabricated by powder metallurgy techniques—either cold pressing and sintering, or hot pressing. It can be machined; and, though it cannot be welded, it is easily brazed or soldered to itself or other metals.

In view of the high tungsten content of heavy metal, one might well ask: Why not just use tungsten, and be done with it? The answer is that heavy metal is a good deal more ductile and machinable than tungsten itself and is easier to compact. Density ranges from about 16.5 to 18.5 grams per cubic centimeter (0.60 to 0.65 pounds per cubic inch). That's more than twice as heavy as steel, and about 50 per cent heavier than lead. This greater density makes it considerably more effective as a radiation shield. Heavy metal is also much stronger than lead. Tensile strengths as high as 110,000 pounds p.s.i. have been developed.



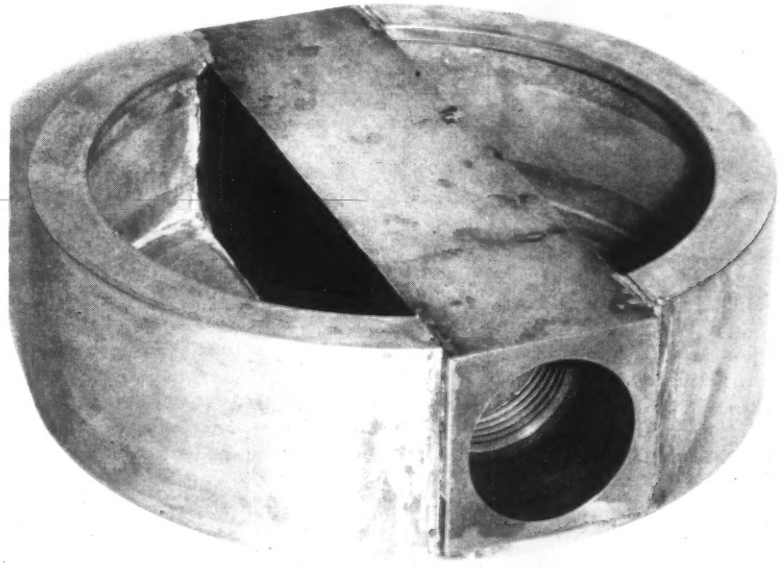
Machinability of heavy metal is demonstrated by this arrow-shaped counterweight.

Where can heavy metal be used? As indicated above, one of its biggest applications is in counterweights—for watches, rotors for gyroscopes, and a good many other instruments. In some cases, it's been used for tool shanks—for boring bars, for instance—on precision machining jobs. Its heavy weight helps hold chatter to a minimum. Coming up are such applications in the atomic energy field as shielding radioisotope-activated electrical batteries (see April, p. 117).

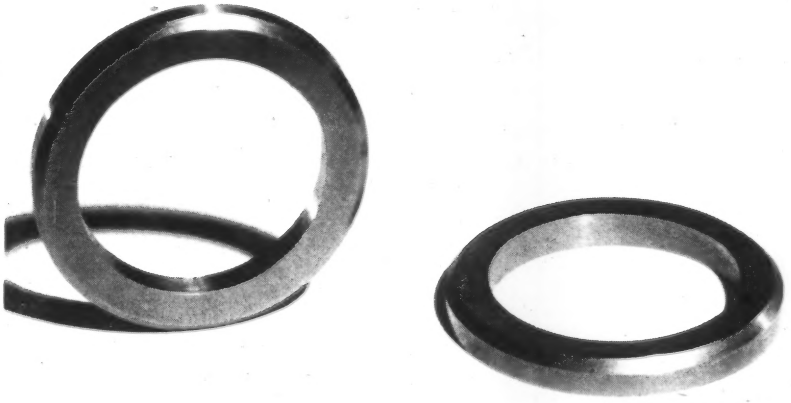
Several companies produce heavy metal and supply fabricated parts, among them, Fansteel, Firth-Sterling, P. R. Mallory, and the Metallurgical Department of General Electric.

Since most users purchase heavy metal in fabricated or at least semi-fabricated form, prices are generally quoted on the basis of dollars per pound of finished product, rather than of the raw powder. The basic price is comparable to that of tungsten carbide, but fabricated parts vary over a wide range. Naturally, the more complex the part, and the closer the tolerances, the more it will cost. A simple part, requiring little or no machining may be priced at, perhaps, $10 a pound. A complex, precision-machined part might run as high as $100 a pound. Design savings, though, often help to offset these high costs, as in the case of the wrist watch wheels pictured below.

—A. R. G.



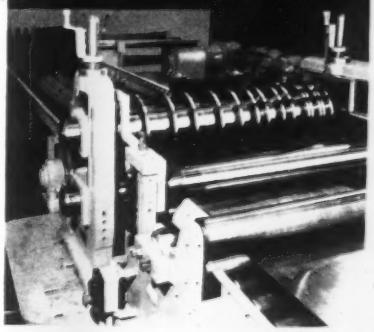
Radiation protection is a big field for heavy metal. This is a container for radiocobalt.



P. R. Mallory & Company

Space saving is the key to the use of heavy metal use in these wrist watch balance wheels.

YODER SLITTING LINES



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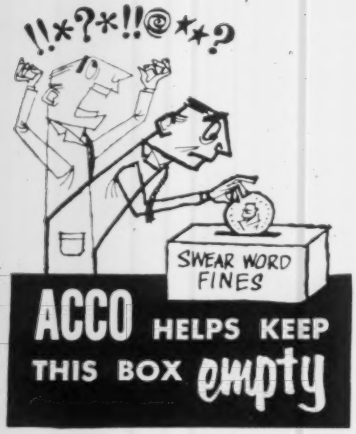

Boy! The things that can happen in an office to make you swear!—Lost letters, mis-filed reports, mis-laid sheets, a file folder that spills its contents, papers blown about by drafts, knocked off desks, mis-handled or destroyed.

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POPULATION CHANGES CAST LONG SHADOWS

continued from page 52

it also provides the benchmarks from which population estimates can be made for the intervening years within the decade; and, what is much more important, for the years beyond the latest census year and on beyond, into the future . . . 10 years . . . 20 years . . . 25 years . . .

People make markets, make up the labor force. As of mid-1957, the American market numbers 171 million people, including our armed forces overseas; and our labor force (Summer peak) runs to about 72 million, including the armed forces.

These are tremendous aggregates, but the years ahead will see them grow and grow. Something like 4.25 million births a year less a little over 1.5 million deaths plus a net of 200,000 to 300,000 in-migration, adds up to a net yearly increase of close to 3 million, or a net rate of about 1.7 per cent a year. That rate of increase is one of the highest in the world—higher than Japan's, higher than India's, and probably higher than Russia's. And our rising trend of man-hour productivity will make possible higher per capita standards of well-being. Not more mouths for the same pie, but a larger pie that will yield bigger slices for more people.

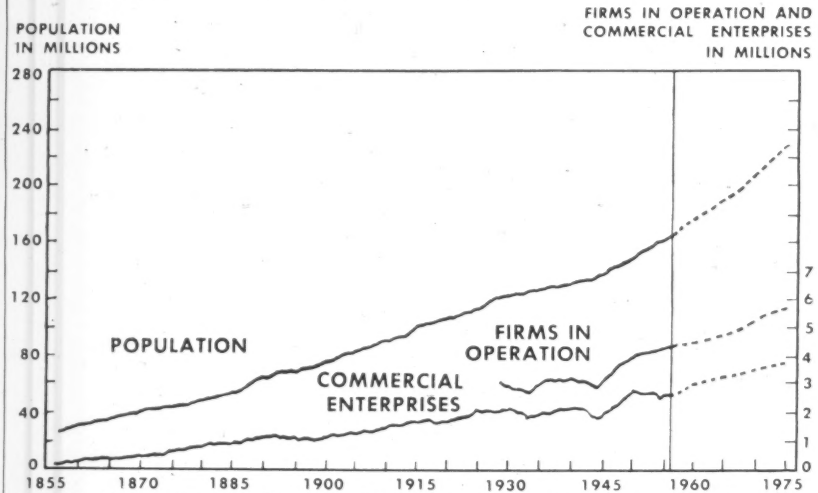
Two hundred and fifty years after the founding of Jamestown in Virginia, the American population had risen to less than 29 million. Over the past 100 years—1857 to 1957—our population has risen to 171 million, a gain of 142 million people in a century. Looking ahead, we can count with some confidence on passing the 200 million mark in about ten years. When the Bi-Centennial of the American Declaration of Independence rolls around in 1976, the prospect is that there will be about 230 million Americans to celebrate it—a long shadow indeed from the 3 million or so of 1776.

The topmost curve on the chart shows in perspective the population of the country by years over the past century and projected population for the years ahead to 1975. Beyond 1975 it can be seen that a population of 300 million by the year 2000 is not difficult to envision.

Business Population

People make markets; people are markets. As our population has grown, so has the business population grown. The curve closest to the bottom of the chart shows by years the number of commercial enterprises listed in the DUN & BRADSTREET *Reference Book* (or its predecessor) as of the middle of the year, from 1857 to 1957, and with projections for the years beyond. The intervening curve, beginning in 1929, shows the estimated total business population as of mid-year to 1955,

A CENTURY OF GROWTH—AND A LOOK AHEAD



Population: Mid-year figures for Continental United States, including armed forces overseas, from Census Bureau. 1957 estimate by author. Projections, 1960-1975, Census Bureau's Series AA (the highest).
Commercial Enterprises: Names at mid-year in DUN & BRADSTREET *Reference Book* (estimated for 1858 and 1860-1870). Estimates for 1957 and later by the author.
Firms in Operation: Average for 1929–1950 and mid-year since 1951 from Office of Business Economics. Estimates for 1956 and later by the author.

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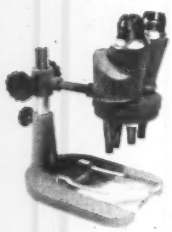

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as computed by the U.S. Department of Commerce, along with the author's 1956 and 1957 estimates and projections for future years.

Listings in the *Reference Book* are confined in general to concerns that make use of commercial credit; many concerns in service and financial lines are not inquired on by Agency subscribers and therefore are not listed. On the average, *Reference Book* listings account roughly for about 65 per cent of the estimated total business population.

Growing Number of Businesses

The essential and fundamental purpose of a business enterprise system is to supply the goods and services required by a population in the maintenance and upbuilding of its standard of living. To meet the needs of the far greater population of the years and decades ahead will require not only a vast increase in output of goods and services; it will require also a great increase in the number of business enterprises. On the average our economy needs one business concern for approximately every 40 people. In 1929 we had one business concern for every 40.2 people; in 1939, one for every 40.6; in 1949, one for every 37.3; and in 1955, one for every 39.1. Naturally the condition of the economy influences the ratio. At the bottom of the Great Depression, in 1933, the ratio was one concern for every 45.1 people; and at the peak of World War II, in 1944, one for every 47.5 people. The business population falls sharply in depression and in war. It is conceivable, of course, that major structural changes in our economy could bring about, over the long term, a sharp distortion in the ratio of people per business; but as of now the ratio of 40 to 1 seems reasonable as an assumption for the future. For the 27-year span 1929–1955, the unweighted average works out at 41 to 1.

The estimates of the total business population go back only to 1929, but what of the DUN & BRADSTREET *Reference Book* listings for which figures are available for a full century, to 1857? They do tell an interesting story, but for the early years there is an understandable qualification. For the new, really unprecedented enterprise the *Reference Book* represented a century ago, it took some years to build up adequate national coverage. Up to about 1885, this coverage

increased sharply, at a rate of increase much steeper than that of the population of the country. In consequence, the number of people per *Reference Book* listing fell sharply and rather consistently from 142.2 in 1857 to 61.2 in 1884. Beginning about 1885, the relationship became roughly stabilized within the range of 50-odd to 60-odd people per listing. In only two years of World War II—1944 and 1945—did the ratio break out of this range, into the 70-odds, although the record shows considerable change from year to year within the stated range.

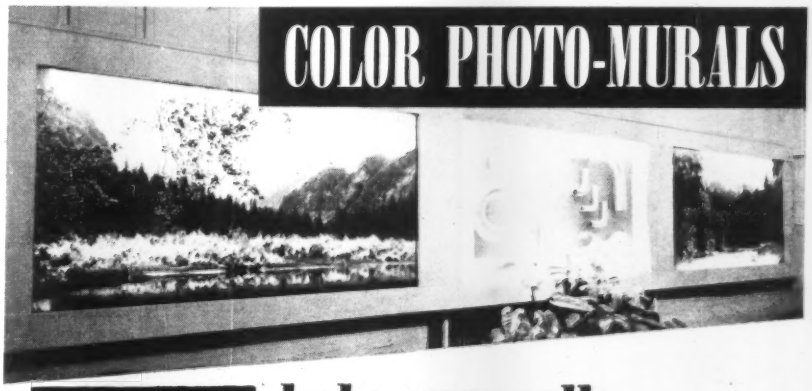
For the years 1885–1956, the unweighted average comes to 60.7 people per *Reference Book* listing. Consider the record by five-year intervals in number of people per listing: 1885, 61.6; 1890, 56.8; 1895, 57.6; 1900, 64.8; 1905, 61.8; 1910, 61.0; 1915, 60.0; 1920, 58.5; 1925, 54.8; 1930, 56.4; 1935, 64.2; 1940, 61.3; 1945 (World War II conditions), 73.3; 1950, 56.3; 1955, 62.6. For 1956, 63.8; and for early 1957, 63.9. It seems reasonable to assume about 60 people per *Reference Book* listing for future years.

Business Projections

Let us next take our projected rounded population figures for certain years and compute projected business population and commercial enterprises (*Reference Book* listings) on the basis of the average ratios stated above:

	1960	1965	1970	1975
Population (*in millions*)	180	195	210	230
Concerns in Operation (*in millions*)	4.50	4.90	5.25	5.75
Commercial Enterprises (*in millions*)	3.00	3.25	3.50	3.83

These projections provide some rough indication of the shape of things to come. In the nature of the case they cannot be taken as measures of certainty. It is, however, as certain as anything can be in human affairs that the American economy must raise its sights over the coming two decades to take in a greatly expanded market that will require tremendous increases in goods and services. To meet the needs of that expanded market will require a great expansion also in the number of business enterprises. These are among the long shadows cast by the changes of today in our dynamic population.



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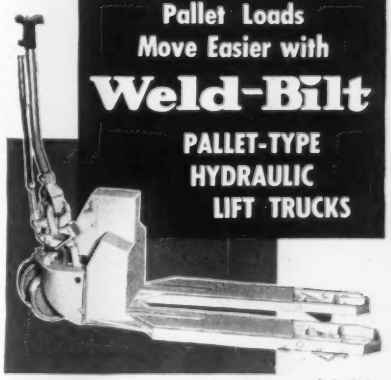

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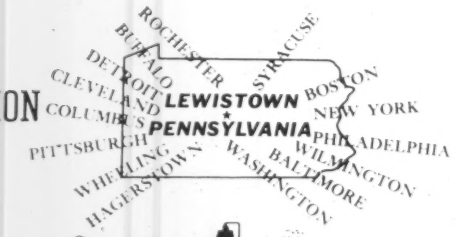

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MERGING WITH SAFETY
continued from page 41

In 1940 Safety formed the Entoleter Division, producer of centrifugal grinding and mixing machines and dust collectors, but until recently it was dependent on railroads for most of its bread and butter. Safety products were used mainly for passenger cars, and the market was exhibiting all the symptoms of secular decline. Since 1926, in fact, the number of passengers cars on the rails had dropped by 44 per cent.

This was the situation in 1952, when Harold F. Kneen, formerly vice president of the Lincoln Electric Company of Cleveland, took over the helm. The balance sheet was in excellent condition, but income statements told a different story—operating profits were low, and declining with the primary market.

Mr. Kneen spent two years strengthening the organization and enlarging research and development activities. Profit position improved, but he and the rest of the managers were aware that new products for new markets could not be developed and put into production fast enough to offset the long-term forces working against sales. Diversification through acquisition was the only logical answer.

Program of Self-Education

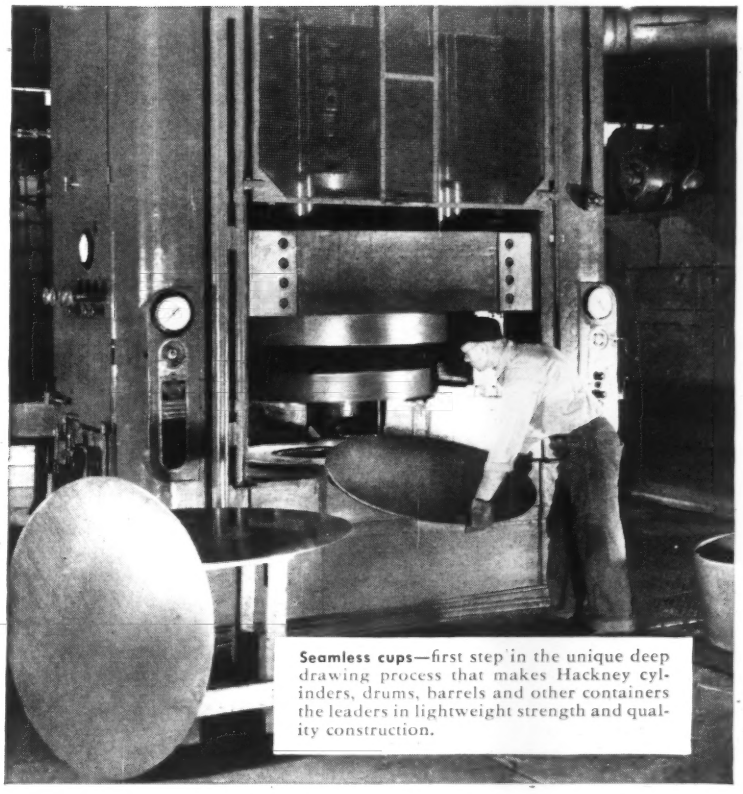
At this point, all that Safety executives knew about mergers was what they read in the papers. As a first step, therefore, they began a process of self-education by consultation. They talked to presidents of diversified companies, many of whom frankly reported their mistakes and the conclusions they drew from hindsight. They consulted consultants (thirteen of them) and teaching authorities who had helped other companies with merger and acquisition.

Then formal study began with the aid of a consultant. Under his guidance, executives began to:

1. Survey all company assets.
2. Set diversification objectives.
3. Establish basic criteria to judge proposed acquisitions.

The survey of assets covered a good deal more than the finances; it included manufacturing facilities, sales organization, management know-how.

The main objective set was to improve the company's basic railroad business, and put Safety on a par with similar companies in ratio of



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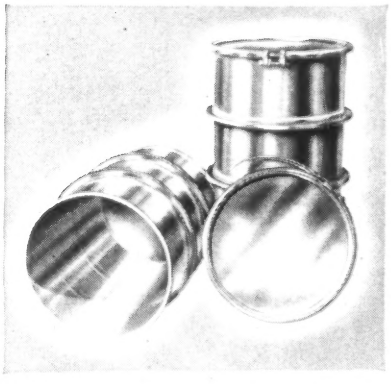

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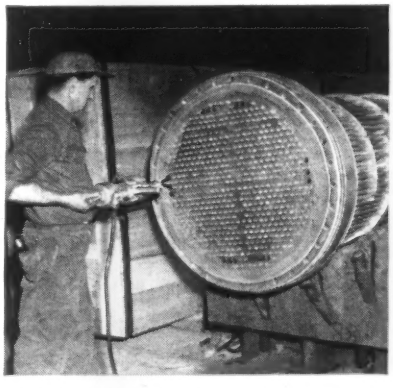

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sales volume to net worth. This, it was estimated, would require a doubling of volume in five years.

Safety was determined not to add new products merely on the basis of marketing potential. It wanted to capitalize on its existing manufacturing skills and sales organization. From its survey of resources, it found that the items it could best make and sell were:

1. High-quality products in the electrical or mechanical field, complex in design and manufacture.
2. Standardized products that could be improved by research.
3. Complete products or assemblies.
4. Products that offered partial patent protection.

These were the criteria—plus, of course, good market potential—that would determine the selection of companies to be acquired.

Then Safety publicized its intentions. It distributed a brochure announcing its criteria, and setting forth the assets it had to work with.

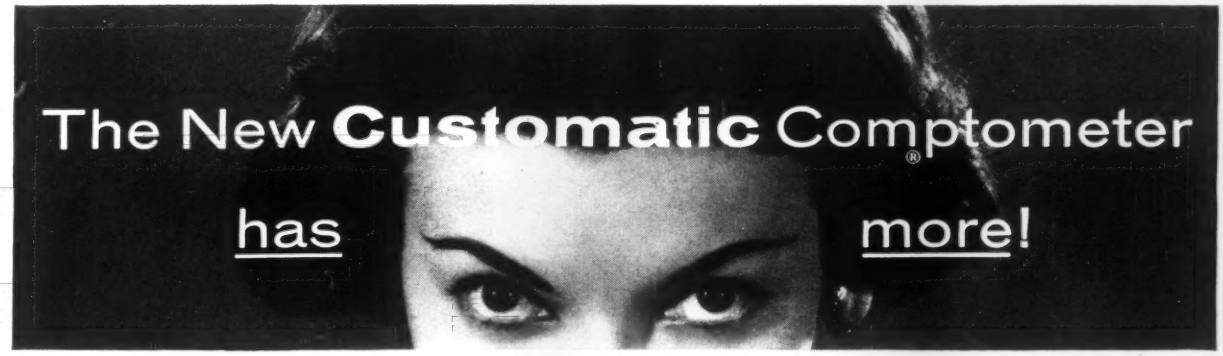
Applying the Criteria

The four companies acquired so far in the course of Safety's diversification program illustrate how the criteria have been applied:

Liquified Gas Utilities, Ltd., a Canadian company. Through its experience with Pintsch gas, Safety management had acquired considerable know-how in the field, and was accustomed to doing business in Canada. This acquisition, in 1954, made possible rapid expansion into the commercial liquified gas market.

Automatic Temperature Control Company, Inc. (*ATC*), producer of electrical controls, including some used in automation. Three other companies with similar products were considered at this point, but ATC was selected on the basis of a survey—made by a Safety staff group—of manufacturers, users, and distributors of the equipment. ATC had other offers, from holding companies and others who wanted to move the operations, but selected Safety because it offered the best evidence that it would promote the general welfare of the company and its employees. The company was acquired in 1955 by an exchange of stock.

Howe Scale Company. ATC produced control equipment for the process industries and Safety's En-



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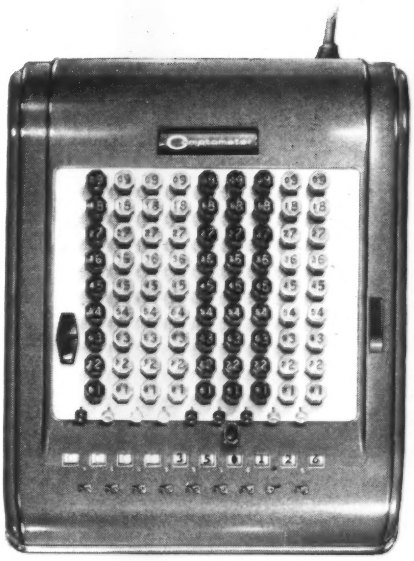

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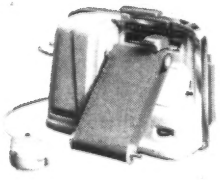

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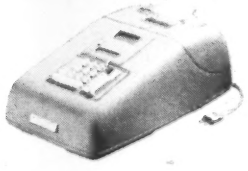

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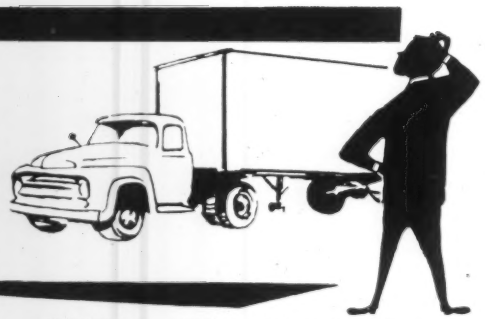

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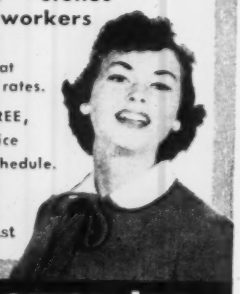

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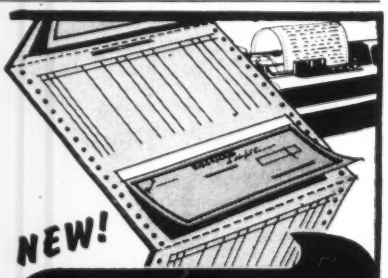

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toleter Division marketed centrifugal and pneumatic conveying machinery for the same field. Market research revealed that there was considerable potential here in products for industrial weighing. ATC was already producing electronic measuring devices for specialized industrial weighing applications, and could contribute to Howe research and development; Howe had a nationwide field organization that could sell and service ATC's weighing systems; Safety itself was equipped to exploit the railroad market for weighing devices, and through its Entoleter Division to develop application of the scales to the grain and process industries; Howe's sales organization could help to sell Entoleter products. Howe was, therefore, purchased for cash in January 1956.

As in the case of ATC, this was good news for employees of the purchased company. A 100-year-old organization, Howe was the major employer in Rutland, Vt., and Safety made clear its intention of keeping operations there.

Star-Kimble. Adhering closely to its established criteria, Safety Industries only last month signed an agreement with Miehle-Goss-Dexter for the purchase of assets of the latter's Star-Kimble Division, manufacturer of electrical brakes, high-frequency generators, and specialized rotating electrical equipment. With this acquisition, Safety will pursue an aggressive program of product development; and by integrating manufacturing operations in its New Haven plant, which already produces similar equipment for the railroad industry, Safety will attain greater output from its existing assets.

Sooner than Estimated

The objective of nearly doubling sales volume has been met in two years instead of the five Safety allowed. Of company sales, 67 per cent are now to industries other than railroads.

"Diversification was planned for long-range betterment," says President Kneen, "to use more fully the skills and capacities within our organization, to protect the stockholders' investment, and to safeguard the employees' future. Despite the short time since the program's inception, evidence of its soundness is reflected in the company's increased sales and operating profits for 1956.

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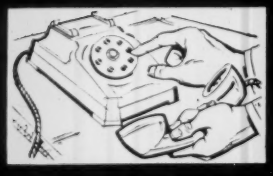

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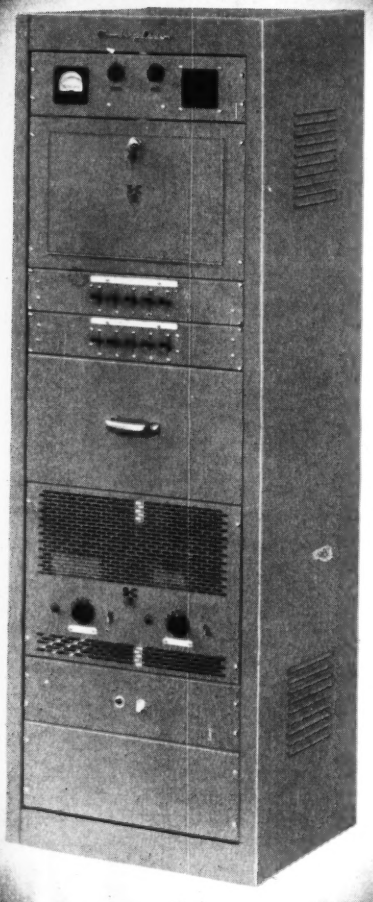

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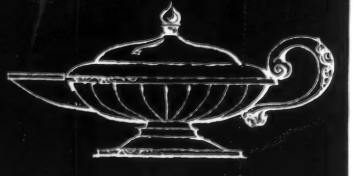

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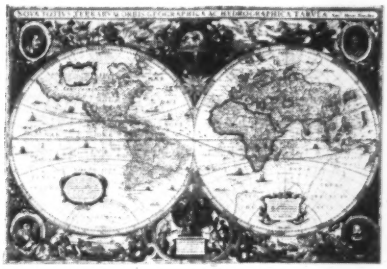
By .....

INTERNATIONAL MARKETS



ALEXANDER O. STANLEY, *Editor*

OVERSEAS MARKETS RESEARCH: A "DO-IT-YOURSELF" GUIDE

If you have been eying foreign trade, but have hesitated to develop a program because of research limitations, here is an outline that will help bring the markets into sharper focus.

THE DIMENSIONS of world markets may seem an enigma. Statistical evaluation may appear impossible. Accustomed to quick access to information, to precise computations, and to data in depth on the U.S. scene, the average American research or marketing man may look with some scorn and impatience at the variety of scattered information available from scattered sources on the international scene. Study and projection of economic patterns of a multi-*billion*-dollar, multi-*million*-consumer U.S. market have created techniques that, if costly in time and money, are justified in terms of sales and profit factors. But using the same mold for a multi-*million*-dollar and multi-*billion*-consumer world market won't work. The possible rewards are smaller, more fragmentary. And there are 99 different world markets, 99 varieties of statistical procedures.

But some sense can be made out of the maze of material if an elastic program is adopted to resolve the key question: Which are the best *potential* markets for your products? And within this framework "potential" should mean for long-term operations, not for short-term improvisations.

As the impact of industrialization broadens, you can be sure that statistical procedures will catch up. In fact, considerable headway in standardization is being made by the Statistical Office of the United Nations. Today 54 of the 99 countries reviewed in this study are filing reports based on the Standard International Trade Classifications; more will conform as the evident value of correlation sinks in. But that's tomorrow.

Tracking Down the Data

Today, the pressing need seems to be more for *collation*. Statistics, reports, analyses are showing up with more frequency in various media; to sift out and to keep track of the useful data is the problem.

To provide help, DR&MI has compiled two sets of tables covering 99 countries and 288 subjects, on which documented data are readily available *in the United States*. These tables are not intended to be all inclusive—but they make it possible to find specific categories of information by country, by U.S. source, by date of issue.

The index pattern is flexible. More markets can be added at will. New subjects can be added to any of the major groups reviewed. They can be interspersed in the tables at will, or related to the categories listed by addition of alphabetical suffixes to the code numbers.

Obviously not all subjects, not all countries, are of interest to all readers. But don't overlook the possibility that new products or new research projects may require new studies. With this method of collation, you will know what is available and where to find it.

Like yesterday's news, statistical reports are short-lived. New tabulations constantly replace the old, and some system must be maintained to channel and compartmentalize the data so that you can find them when you want to use them. The code employed on the DR&MI tables may be used for this purpose. The four basic components provide:

	Example
The Country	Argentina
The Year published	6=1956
The Subject	F2=number of manufacturing industries
The Source	:24=UN Bulletin of Statistics

This can be coded to read:
Argentina 6/F2 :24.

continued on page 107

ABOUT THE SOURCES

U.S. Department of Commerce, Washington, D.C.
(also field offices in Albuquerque, Atlanta, Boston, Buffalo, Charleston, Cheyenne, Chicago, Cincinnati, Cleveland, Dallas, Denver, Detroit, Greensboro, Houston, Jacksonville, Kansas City, Los Angeles, Memphis, Miami, Minneapolis, New Orleans, New York, Philadelphia, Phoenix, Pittsburgh, Portland, (Ore.), Reno, Richmond, St. Louis, Salt Lake City, San Francisco, Savannah, Seattle).

—**Bureau of Foreign Commerce :1, :2, :3, :4, :5, :6, :7, :8, :9, :10, :11, :12, :13, :14, :15, :16, :17 :20, :21** publishes all WTIS reports; also *Foreign Commerce Weekly*; also *Investments Opportunity Abroad*, a semi-monthly bulletin reporting specific investment opportunities abroad by country and commodity.

All WTIS reports contain bibliography of governmental sources, documents and publications from various sources on specific subjects following the outline of information given in each WTIS report. These are a valuable reference for any individual requiring a more penetrating study than is possible in the condensed WTIS reports.

—**Bureau of the Census (amplifies :21)** publishes detailed monthly reports on U.S. export/import movements. **Report FT410** analyses Exports by Commodity and Country of Destination. **Report FT420** analyses U.S. Exports by Country of Destination/Commodity. **Report FT110** analyses U.S. Imports by Commodity/Country of Origin; **Report FT120** analyses U.S. Imports by Country of Origin/Commodity. **Report FT800** analyses U.S. Trade with Puerto Rico, Virgin Islands, other U.S. Territories. Also see Puerto Rico-Census of Business which contains detailed breakdown of retail, wholesale, and selected service trades. **Catalog-U.S. Foreign Trade Statistical Publications** issues monthly supplement that lists special reports, some published, others unpublished, on Foreign Trade and selected subjects. **Foreign Trade Statistics Notes** issued monthly or bi-monthly. Supplements reports on U.S. imports, exports, shipping, also on unusual transactions appearing in statistics, special import and export programs, changes in types of shipments included in statistics, problems of commodity and country classifications, problems of evaluation, changes in foreign trade and shipping statistics. **The Foreign Trade Division, Bureau of Census,** will also undertake special studies on a cost basis. Usual procedure is to make a pilot study (costing from $25 to $100) to determine the total cost of preparing any special report. Index to the 1956 special compilations (and costs) are listed in the Catalog of U.S. Census Publications—1956—on pages 26 thru 36 inclusive. **Schedule A-Statistical Classification of Commodities** imported in the United States (1954 and supplements) and published in loose leaf form. This extensive compilation gives the commodity number and the duty rates on all types of products in the United States. **Schedule B—Statistical Classification of Commodities** exported from the U.S. (1955 and supplements) published in loose leaf form. This basic manual is used in compiling the commodity information on exports statistics. There are some 60,000 names of export commodities and 2,900

continued on page 111

DOCUMENTED RESEARCH DATA: By Subject By Publication Source

SOURCES ➡

SUBJECT ⬇

Subject Code		:1 Basic Data on Economy	:2 Economic Developments in—	:3 Foreign Commerce Weekly	:4 Establishing a Business in—	:5 Utilities	:6 Foreign Investment Laws (Brief)	:7 Living Costs and Conditions	:8 Controls Regulations (9 Categories)	:9-17 UN Bulletin of Statistics	:24 International Statistics	:25 International Financial News Survey	:26 Series, Laws Affecting Business	:30 Statistical Abstract (Statistical Studies)	:31 Distribution Statistics on 15 Countries	:32 UN Economic Surveys (area studies)	:33
A	THE CAPITAL STRUCTURE					:5		:7									•:33
B	THE ECONOMIC STRUCTURE	:1	:2	:3	:4			:7				:25			:31	:32	•:33
C	THE LAND																
C1	Geography	:1						:7									
C2	Climate	:1						:7	:8								
C3	Regional Characteristics							:7									•:33
C4	Natural Resources							:7									
C5	Soil							:7									
C6	Water			:3				:7						:30			
C7	Marine							:7									
C8	Minerals & Metals			:3				:7				:25					
C9	Vegetation & Insects			:3				:7									
C10	Others							:7									
C11	Agriculture	:1	:2	:3				:7				:25			:31		
C12	Primary Crops		:2	:3				:7							:31		:33
C13	Livestock Population										:24	:25			:31		:33
C14	Production, No./Index/Income		:2	:3							:24		:26		:31		:33
C15	Exports		:2	:3				:7			:24	:25	:26		:31		:33
C16	Major World Commod., Prices, $	:1										:25	:26				:33
C17	Forestry/Fisheries/Apiculture	:1		:3				:7			:24	:25			:31		:33
D	THE PEOPLE							:7			:24					:32	
D1	Population/Vital Statistics	:1		:3				:7			:24	:25		:30		:32	•:33
D2	Clusters of Pop.					:5		:7							:31	:32	
D3	Food, Health Standards			:3				:7	:8						:31		
D4	Medical Services			:3					:8						:31		
D5	Clothing/Shelter			:3				:7	:8								
D6	Culture/Churches/Recreation								:8								
D7	Education							:7	:8		:24				:31		
D8	No. of Students										:24						:33
D9	No. of Teachers										:24						
D10	No. of Schools										:24						
D11	Degree of Illiteracy										:24						
D12	Students Subsidy											:25					
D13	Skills							:7									
E	THE MANPOWER														:31		
E1	Employment		:2	:3				:7			:24	:25	:26		:31	:32	:33
E2	In Industry, No., Index	:1									:24				:31	:32	•:33
E3	In Others, No., Index										:24				:31	:32	:33
E4	Hours worked				:4						:24						:33
E5	Hourly earnings		:2								:24		:26				:33
E6	Monthly earnings/Policy		:2								:24	:25			:31	:32	
E7	Unemployment Index										:24	:25				:32	:33
E8	Unions		:2		:4			:7									
E9	Labor Laws—Basic			:3				:7						:30			
E10	Labor Laws—Special			:3				:7						:30			
E11	Labor Relations		:2	:3								:25			:31		:33
E12	Personnel Turnover															:32	:33
E13	Regulations on Employment			:3	:4												
E14	Tax Exemptions for Fgn. Employees											:25					
F	THE INDUSTRIES	:1						:7							:31		:33
F1	State Enterprise, Monopolies	:1		:3				:7						:30			:33
F2	Manufacturing Units, No.							:7			:24				:31		•:33
F3	Mfg. Prod., gross/net (n)	:1		:3							:24	:25	:26				:33
F4	Mfg. Prod., Index			:3								:25	:26				
F5	Mfg., Installed Power			:3							:24					:32	
F6	Extractive Industries, No.	:1		:3				:7				:25					
F7	Extractive Industries, Prod. Index	:1									:24	:25	:26				:33
F8	Services Industries, No.			:3				:7					:26		:31	:32	
F9	Industrial Investment	:1		:3				:7				:25					•:33
F10	Industrial Development		:2	:3				:7				:25					:33
F11	Factors Affecting Investment			:3	:4												:33
F12	Mkt. Prices/Index, Industrl. Shares		:2								:24	:25	:26			:32	•:33
F13	Dividend Rates/Earning		:2									:25	:26				
F14	U.S. Aid Programs			:3				:7				:25					:33
F15	U.S. Companies Branch Invsts.		:2	:3				:7				:25					:33
F16	U.S. Licensing Contracts		:2														
F17	Inventories											:25					:33
G	THE UTILITIES	:1															
G1	STATE ENTERPRISE			:3				:7						:30			:33
G2	ENERGY			:3				:7			:24	:25					
G3	Electric Power Output Cpcty.	:1		:3		:5		:7				:25					•:33
G4	Gas/Oil Supply, Production			:3		:5		:7			:24	:25					
G5	Consumers, No., Rates					:5			:8								

DOCUMENTED RESEARCH DATA: By Subject/By Publication Source

SOURCES ➡

SUBJECT ⬇

Subject Code		Basic Data on Economy :1	Economic Developments in— :2	Foreign Commerce Weekly :3	Establishing a Business in :4	Utilities :5	Foreign Investment Laws (Brief) :6	Living Costs and Conditions :7	Controls, Regulations (9 Categories) :8	UN Bulletin of Statistics :9–17	International Financial Statistics :24	International Financial News Survey :25	Series: Laws Affecting Business :26	Estadistica (Statistical Studies) :30	Distribution Statistics on 15 Countries :31	UN Economic Surveys (area studies) :32	:33
G6	Areas Served																
G7	Future Expansion			:3		:5											
G8	TRANSPORTATION					:5						:25					
G9	AIRLINES AIRPORTS	:1		:3		:5		:7	:8								
G10	Miles KM, Flown Dom. Int.					:5											
G11	Revenue, Traffic, passenger			:3		:5											
	Revenue, cargo mail			:3		:5											
G12	Areas Served			:3		:5											
G13	Charges			:3		:5											
G14	Regulations Int. Agreements			:3		:5						:25					
G15	Development Prospects			:3		:5											
G16	Registrations Civil Aircraft					:5											
G17	RAILWAYS	:1		:3				:7	:8								
G18	Gage Length of Systems					:5											
G19	Traffic Areas Served					:5					:24						:33
G20	Rolling Stock Production			:3							:24						
G21	Future Expansion			:3		:5						:25					
G22	HIGHWAYS							:7	:8			:25					
G23	Areas Served			:3		:5											
G24	Traffic	:1				:5											
G25	Maintenance			:3		:5											
G26	Future Expansion, Finance			:3		:5											
G27	Motor Cars Production			:3							:24	:25					:33
G28	Motor Cars Registered							:7	:8		:24					:32	:33
G29	INLAND WATERWAYS	:1		:3				:7			:24						
G30	OCEAN TRANSPORTATION			:3				:7				:25		:30			
G31	Fleets			:3							:24	:25					
G32	Traffic			:3							:24	:25					
G33	Tonnage Launched Future Expansion			:3							:24	:25					
G34	FREE ZONES	:1		:3						:11							
G35	STORAGE			:3				:7		:11							
G36	FREIGHT FORWARDING			:3				:7		:11							
G37	TRANSPORTATION AGREE. (INT.)			:3								:25					
G38	COMMUNICATIONS	:1		:3				:7	:8		:24						
G39	POSTAL SYSTEM	:1							:8	:11							
G40	Letters mailed, No.										:24						
G41	TELEGRAPH SYSTEM	:1		:3					:8								
G42	Telegrams, No.										:24						
G43	TELEPHONE SYSTEM	:1							:8								
G44	in service, No.										:24					:32	
G45	RADIO & TV—see Advtsg.																
G46	MOVIE HOUSES—see Advtsg.																
G47	CONSTRUCTION			:3				:7			:24						
G48	New Bldgs., No.										:24						
G49	New Projects			:3								:25					:33
G50	U.S. COMPANY INVESTMENTS		:2	:3								:25					
G51	U.S. AID PROGRAMS			:3				:7				:25					:33
G52	TOURISM			:3		:5		:7			:24	:25					
G53	Regulation on Travellers			:3								:25					
G54	Regulation for Residence								:8								
H	THE BANKING SYSTEM	:1						:7					:26	:30	:31		
H1	Central Bank			:3									:26				
H2	Policy		:2	:3								:25					:33
H3	Assets							:7				:25	:26				:33
H4	Gold Reserves $			:3								:25	:26				:33
H5	Foreign Exchange Reserves $		:2	:3							:24	:25	:26				:33
H6	Monetary Developments	:1	:2	:3								:25	:26				:33
H7	Money Supply Deposits (n) Savings		:2	:3				:7			:24	:25	:26				:33
H8	Interest Rates		:2	:3							:24	:25	:26				:33
H9	Exchange Rates ($)	:1		:3				:7			:24	:25	:26				
H10	Domestic Credit of Banks			:3				:7			:24						:33
H11	Borrowing Facilities		:2					:7									
H12	Negotiable Instruments							:7						:30			:33
H13	Types of Credit Institutions	:1										:25		:30			
H14	Export Credit Insurance											:25					
H15	U.S. Investment Guar. (EXIM)											:25					
H16	U.S. Bank Loans (EXIM)			:3								:25					:33
H17	U.S. Letters of Credit (EXIM)			:3													
H18	U.S. Export Credit Lines (EXIM)			:3													
H19	Indebtedness to U.S. Exporters			:3													
I	THE PUBLIC FINANCES																
I-1	National Budget		:2					:7			:24	:25	:26				* :33
I-2	Public Debts—State		:2								:24	:25					:33

A more precise dating can be developed by prefixing the year with the month of issue:
Argentina Oct. 6/F2 :24.

This coding system can help in identifying news items that appear in the weekly and monthly publications. Some of these occasionally report specific data before they are released in the statistical reports of the U.S. Department of Commerce, the UN Statistical Office, and other basic sources identified in the DR&MI tables. The coding can be limited to specific subjects of *current* interest.

How to Develop a Simple Index

If your present needs call for simpler statistical fare, you can keep most of the information in a loose-leaf binder by using only the index sheets or catalogs of the various publications that release such compilations. These are:

WTIS REPORTS: Index dated January 1957 shows all reports published in this series by country and by subject. Period covered: November, December 1956. Detailed through April 1, 1957 in DR&MI tables.

FOREIGN COMMERCE WEEKLY: Index dated April 1, 1957. Published quarterly. Arranged by countries. Period covers January 1 to March 31, 1957; also previous index for period October 1 to December 31, 1956 published January 21, 1957 is included in this study.

FOREIGN INVESTMENT SERIES: Detailed by country in DR&MI study, Table on page 110 Item :7

U.S. CENSUS PUBLICATIONS: Catalog covers 1956 releases, see section 3, pages 20 through 25. Also separate *Catalog of the U.S. Foreign Trade Statistical Publications* available. Government Printing Office issues PL Series monthly, reporting special studies on *Foreign Trade Commerce* (PL 62); *Periodicals* (PL36); *Tariff and Taxation* (PL37)

DISTRIBUTION DATA GUIDE: Index to subjects, countries published monthly and semi-annually. Latest master index published January 1957.

UN PUBLICATIONS: Catalog covers period 1945 to 1955. New 1956 supplement due in May 1957.

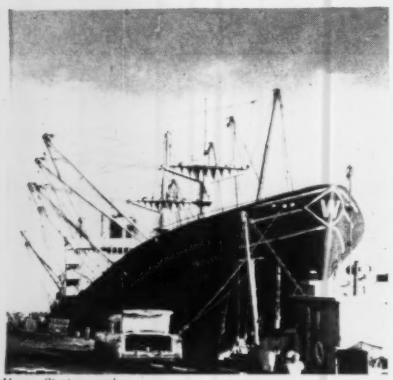
INTERNATIONAL MONETARY FUND PUBLICATIONS: Annual index, latest published for year ending June 1956. All reports issued to April 1, 1957 have been posted in DR&MI Tables in this study.

EXPORT-IMPORT BANK: Semi-annual report, latest published January 1957 covers second half of 1956.
PAN AMERICAN UNION PUBLICATIONS: Ten-year catalog covers period 1943-1954; irregular supplements issued through 1956.

A Reference Library

And if you are willing to let your research library or division expand book shelf space, and want to have an array of material at your fingertips, these yearbooks will help:

- *STATISTICAL ABSTRACT OF THE UNITED STATES:* 1956 Section 32 reviews annual data on foreign commerce; section 34 reviews comparative international statistics.
- *THE FOREIGN INVESTMENT (FACTORS) SERIES.*
- *WTIS MONTHLY STATISTICAL REPORT on U.S. Exports & Imports.* Usually 8 to 12 pages. Contains breakdown by dollar value and



Howe Photograph

quantity of total U.S. export and import trade with 75 world markets. Figures by month and cumulative, with previous year's comparisons.

- *SCHEDULE A-STATISTICAL COMMODITY CLASSIFICATION OF U.S. IMPORTS* and/or *SCHEDULE B—U.S. EXPORTS.*
- *ANNUAL DIRECTION OF INTERNATIONAL TRADE,* showing world exports and imports of most of the 99 countries in this review.
- *UN YEARBOOK OF INTERNATIONAL TRADE STATISTICS.*
- *UN STATISTICAL YEARBOOK.*
- *UN ANNUAL ECONOMIC SURVEYS* (detailed in sources, page 111).
- *INTERNATIONAL FINANCIAL STATISTICS* (MONTHLY)
- *ANNUAL REPORT ON EX-*

continued on page 112

DOCUMENTED RESEARCH DATA: By Subject By Publication Source

SUBJECT ⬇ — SOURCES ⬅

Subject Code		Source Code	:1 Basic Data on Economy	:2 Economic Developments in—	:3 Foreign Commerce Weekly	:4 Establishing a Business in—	:5 Utilities	:6 Foreign Investment Laws (Brief)	:7 Foreign Investment Factors (Comprehensive)	:8 Living Costs and Conditions	:9-17 Controls: Regulations (9 Categories)	:24 UN Bulletin of Statistics	:25 International Financial News Survey	:26 International Financial Statistics	:30 Series: Laws Affecting Business	:31 Statistica (Statistical Studies)	:32 Distribution Statistics on 15 Countries	:33 UN Economic Surveys (area studies)
I-3		Public Debts—Local		:2								:24	:25					:33
I-4		Municipal Finance		:2					:7				:25					
I-5		Government Bond Yields										:24		:26				
I-6		Government Loans		:2	:3								:25					:33
I-7		International Loans		:2	:3								:25	:26				:33
I-8		International Grants											:25					
I-9		Loans/Credits from EXIM Bank			:3									:26				
I-10		World Bank Loans			:3								:25	:26				
J		THE TAX STRUCTURE																
J1		Taxation		:2	:3	:4			:7						:30			:33
J2		Accounting & Records							:7				:25					
J3		National/State Tax Problems			:3													
J4		Industrial/Company Income Tax				:4												
J5		Professional Taxes				:4												
J6		Property/Exploitation Taxes				:4												
K		THE INSURANCE SYSTEM	:1						:7		:16				:30			
K1		Insurance Regulations	:1								:16				:30			
K2		Types of Coverage	:1								:16							
K3		Operational Reports			:3						:16							:33
K4		Premium/Loss Data									:16							
K5		Reinsurance			:3						:16							
K6		Investments									:16							:33
K7		Taxation			:3						:16				:30			
L		THE ADVERTISING MEDIA							:7		:16							
L1		Advertising							:7		:13							
L2		Daily Newspapers, No.										:24						
L3		Daily Papers, circulation										:24						
L4		Daily Papers, Copies per M of Pop.										:24						
L5		Newsprint Consumption										:24						
L6		Radio Stations, No.										:24						
L7		Radio Receiving Sets, No.	:1														:32	
L8		TV Stations, No.			:3													
L9		TV Receiving Sets, No.			:3												:32	
L10		Samples/Exhibits/Fairs			:3				:7		:11		:25					
											:17							
L11		Motion Pictures Theaters/Attend.			:3													
M		THE MARKET	:1															* :33
M1		Gross National Product (n)		:2	:3							:24	:25	:26		:31		:33
M2		" Domestic Expenditures		:2										:26			:32	:33
M3		Family Expenditure Analysis															:32	* :33
M4		National Income/by Groups										:24	:25	:26		:31	:32	
M5		Cost of Living Index/values		:2					:7	:8		:24	:25	:26		:31		:33
M6		Retail Trade Index/values		:2	:3				:7	:8		:24		:26				:33
M7		Wholesale Trade Index/values		:2					:7			:24		:26				
M8		Internal Trade			:3							:24		:26				
M9		Commercial Commod. Exchanges							:7									
M10		Marketing Channels	:1		:3				:7		:14							
M11		Existing Business Units, No.															:32	:33
M12		Analysis, Business Units, Sales type															:32	
M13		Analysis, Retail Stores, Urban															:32	
M14		Analysis, Self Service Stores															:32	:33
M15		New Business Units established															:32	
M16		Business Mortalities															:32	
M17		Inventories											:25				:32	
M18		Appointing an Agent							:7									
M19		Trade Customs	:1															
M20		Food Consumption															:32	
M21		Consumption, Other Goods															:32	:33
M22		Commercial Credits/Controls	:1		:3				:7				:25					
M23		Installment Credits/Controls	:1						:7				:25					:33
M24		Price/Distribution Controls	:1		:3				:7				:25					
M25		Standardization/Weights/Measures							:7		:10							
M26		Packing/Packaging			:3				:7		:11							
M27		Labeling/Marking Regulations			:3						:10							
											:11							
											:12							
M28		Pharmaceutical Regulations			:3						:11							
											:16							
M29		Food Regulations			:3						:15		:25					
M30		Unfair Competition			:3						:12							
N		THE INTERNATIONAL TRADE													:30	:31		:33
N1		Foreign Trade	:1		:3				:7				:25	:26				:33
N2		Balance of Payments (n)			:3							:24	:25	:26		:31		:33
N3		EPU Balances											:25	:26				
N4		Exports, Value, $/n/Index		:2	:3				:7		:9	:24	:25	:26			:32	:33
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DOCUMENTED RESEARCH DATA: By Subject/By Publication Source

SOURCES ➡

SUBJECT ⬇

Subject Code	Source Code	:1 Basic Data on Economy	:2 Economic Developments in—	:3 Foreign Commerce Weekly	:4 Establishing a Business in	:5 Utilities	:6 Foreign Investment Laws (Brief)	:7 Living Costs and Conditions	:8 Controls, Regulations (9 Categories)	:9-17 UN Bulletin of Statistics	:24 International Financial News Survey	:25 Series, Laws Affecting Business	:26 Statistica (Statistical Studies)	:30 Distribution Statistics on 15 Countries	:31 UN Economic Surveys (area studies)	:32	:33
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Q3	Trade Tariff Agreements Policy	:1	:2	:3	:4			:7		:10		:25					
Q4	Government Inspection							:7		:14							
Q5	Government Purchasing Procedure							:7									
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Q11	For. Invest. Law, insurance guaranty			:3			:6	:7				:25					
Q12	Capital Profit Repatriation				:4		:6					:25					
Q13	Investment Incentives			:3													
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Q15	Barter Agreements											:25					
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R3	Subordinate business terms							:7									
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*SPECIAL SUBJECT REVIEWED IN: 33—C-3, Utilization of land; D-1, Population projections; E-2, Output per manhour; F-2, Industrial capacity; F-9, External financing of local enterprise/reverse investments (local holding of U.S. Securities); F-12, New capital flotations; G-3, Power consumption; I-1, Budget in relation to GNP; M, Gross and net fixed investment; M-3, Per capita consumption; (n), National currency.

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DOCUMENTED RESEARCH DATA: BY COUNTRY AND BY PUBLICATION SOURCE

NOTE: All designations in the table represent the year in which the material was published; that is, 7=1957, 6=1956, 6a=second half of 1956, 5=1955. *Exceptions:* Codes 20 through 24 show year of data. *See top of first column, opposite page, for identification of code nos.* ➡

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Canada	7		6/7		G2/6					5	6	7	6					6	5	5	6	6	6	6	6/6a/7	6	6	6	6		6		
Greenland			6/7																			6		6									
Latin America																		6							7								
Argentina	5		6/7						6	5			5	5		4		6	5	3	6	6	6	6	6/6a/7	6	6	6	6	5	6		5
Bolivia	5	6	6/7		G22/7	F6/6			6		4		6	5			6	6			6	6	6	6	6/6a/7	6	6	6	6	5	6		5
Brazil		5	6/7	5	G9/6				6	5			5	6		6		6	5	3	6	6	6	6	6/6a/7		6	6	6	5	6		5
British Guiana			6/7															6				6	6	6									
British Honduras																		6				6	6	6									
Brit. West Indies	6		6/7							6								6				6	6	6	6/6a				6				
Chile	5		6/7			5			5	6	5		6						5		6	6	6	6	6/6a/7	6	6	6	6	6	6		5
Colombia			6/7		G3/6		3		6	5	6		4			7		6	5	4	6	6	6	6	6/6a	6	6	6	6	3	6		5
Costa Rica	4	5	6/7				6*			5			5			6		6	5		6	6	6	6	6/6a	6	6	6	6	4	6		5
Cuba		7	6/7				6			5	5		5					6	5	3	6	6	6	6	6/6a		6				6		5
Dominican Republic			6/7	6						5			5					6	5	5	6	6	6	6	6	6	6	6	6	6	6		5
Ecuador	5		6/7	5			×		5	5	6		5	6			6	6		5	6	6	6	6	6/6a/7	6	6	6	6	5	6		5
El Salvador	5	5	6/7				6*											6		4	6	6	6	6	6	6	6	6	6		6		5
French Guiana										7	5			6				6				6		6									
Fr. West Indies																		6				6	6										
Guatemala	6	5	6/7			6	6*			7			5					6	5		6	6	6	6	6/6a	6	6	6	6	1	6		5
Haiti			6/7										6				7	6		5	6	6	6	6	6	6	6	6	6	5	6		5
Honduras	5	5	6/7		G9/6		6*			6								6	5	5	6	6	6	6	6	6	6	6	6		6		5
Mexico		6	6/7	5	G9/7	5	6				7		5			7		6	5	4	6	6	6	6	6/6a/7	6	6	6	6	6	6		5
					G22/7																												
Neth. Antilles			6/7							7								6		6	6	6	6					6					
Nicaragua	6		6/7			5	6*			6								6		5	6	6	6	6	6/6a	6	6	6		6			5
Panama	5		6/7							6	4		6		6			6	5		6	6	6	6	6	6	6	6		6			5
Paraguay			6			5	5		5	5			5					6			6	6	6	6	6	6	6	6	6	3	6		5
Peru		5	6/7	6	G9/6		×		6	6			5					6	5	4	6	6	6	6	6/6a/7	6	6	6	6	5	6		5
Puerto Rico																					6	6	6	6				6	6		6		
Surinam			7																			6	6	6	7			6					
Uruguay		6	6								6			6				6	5	4	6	6	6	6	6/6a/7	6	6	6	6	5	6		5
Venezuela			6	7	G3/6		3	6	6	5	5					6	6	6	5	4	6	6	6	6	6/6a	6	6	6	6		6		5
					G17/6																												
Virgin Islands																					6	6	6	6									
Europe																		6															
Austria	6	7	6/7	6	G9/4			7	5	6	6	7		6			6	6		3	6	6	6	6	6/6a/7	6	6	6	6			3	6
Belgium-Luxembourg	6	7	6/7	7					5		5			6				6	5		6	6	6	6	6/6a	6	6	6	6			3	6
Denmark	7	7	6/7	6					6		6			5				6		5	6	6	6	6	6/6a/7	6	6	6	6			3	6
Finland		5	6/7							6	5							6			6	6	6	6	6/6a/7	6	6	6	6				6
France	6	5	6/7	6				6	5	7	5	6						6	5	3	6	6	6	6	6/6a/7	6	6	6	6			3	6
Germany	6	7	6/7	5	G9/4	5			5		6	6					6	6	5	5	6	6	6	6	6/6a/7	6	6	6	6				6
Greece	6		6/7	5		5				6	4			5			5	6		3	6	6	6	6	6/6a/7	6	6	6	6			3	6
Iceland			6/7							6	6							6			6	6	6	6	6/6a/7	6	6	6	6				
Ireland	5		6/7		G3/5					5							7	6			6	6	6	6	6/6a	6	6	6					
Italy	6	5	6/7						6		6							6	5	5	6	6	6	6	6/6a/7	6	6	6	6			3	6
Netherlands	7		6/7	6					5		5							6	5	5	6	6	6	6	6/6a/7	6	6	6	6			3	6
Norway	6	5	6/7	5	G3/5					6	5						7	6		3	6	6	6	6	6/6a/7	6	6	6	6			3	6
Portugal	5		6	6					6	5	5							6	5	3	6	6	6	6	6	6	6	6	6			3	6
Soviet Bloc			7																		6	6	6	6	6/6a/7			6					
Spain	6		6/7	5	G3/4			7	5	6								6	5	5	6	6	6	6	6	6	6	6	6				
Sweden	6	6	6/7	5		6			5	6	5			6	6		7	6	5		6	6	6	6	6/6a/7	6	6	6	6			3	6
Switzerland	6	7	6/7	5				7	5		5			6				6	5	4	6	6	6	6	6/6a	6	6	6				3	
Trieste																					6	6		6									6
United Kingdom	5		6/7	6				7		7	5		5		6		6	6	5	5	6	6	6	6	6/6a/7	6	6	6	6			3	6
Yugoslavia	5		6	5					6		5						6	6		3	6	6	6		6/6a/7	6	6	6	6				
Middle East																						6			7								
Aden		5	7																			6	6	6									
Egypt		6	6/7			5			5		5							6	5	6	6	6	6	6	6/6a/7	6	6	6	6				5
Iran	5		6/7	5		6		6		6	5						6	6			6	6	6	6	6/6a/7	6	6	6	6				5
Iraq	6	6	6/7			6			5		5			7			6	6		4	6	6	6	6	6/6a/7	6	6	6	6				5
Israel	5	5	6/7	6		5			6									6		3	6	6	6	6	6/6a/7	6	6	6	6				5
Jordan			6/7	6		5				6	6							6			6	6	6	6	6/6a/7		6	6					
Kuwait	6	6	6															6		6	6			6	6/6a/7								
Lebanon		6	6/7	6		6				6	5					6	6	6		5	6	6	6	6	6/6a/7	6	6						5
Saudi Arabia		5	6/7								6				7						6	6		6	6/6a/7		6		6				
Syria		6	6/7								5							6				6	6	6	6/6a/7		6		6				5
Turkey	5		6/7	5		6	6	7		6	5			5		6	6	6		3	6	6	6	6	6/6a	6	6	6	6				5/6
Africa																									6a								5
Algeria			7															6			6	6	6	6	6								
Angola			7	5		F6/6			5					5							6	6	6	6									
Belgian Congo		5			G22/5				6											4	6	6	6	6				6					5
					G3/5																												
					G17/5																												
Brit. East Africa			6							6	5							6			6	6			6/6a/7								
Brit. West Africa										6	5	5						6			6	6			6/7								
Ethiopia		6	6/7						6	6	7							6			6	6	6	6	6	6	6	6	6				
Fr. Equatorial Afr.	5	6									5							6				6	6	6									5
Fr. West Africa	5	6	7		G9/6					6	6							6		6	6	6	6	6									5
Ghana (Gold Coast)	7	6	6/7	6					6+									6		4		6	6	6	6/6a/7								
Liberia	5	6	6/7	4					7									6	5		6	6	6	6		6	6	6					
Libya			6				7	6	5	6								6			6	6	6	6	6/7		6	6					5
Morocco			6/7	5																4	6	6	6	6				6					
Mozambique		6	7					7						5		5	6					6	6	6									
Nigeria		6	6						6								6	6		4	6	6	6	6	6a/7								
Rhodesia-Nyasaland	5		6/7				6		6	6								6		5	6	6	6	6	6/6a/7			6					
Sudan	6		6/7		G17/6				6													6	6	6	6/6a/7			6					
Tangier	4	6		4										5				6				6		6									
Tunisia	5		7															6				6	6	6	6								
Union of South Africa	5	6	6/7	6	G17/6		4		7	5	5	5		6	6			6	5	5	6	6	6	6	6/6a/7	6	6	6	6				
Far East-Oceania																																	
Afghanistan	5		6/7						5	5	5											6	6	6	6		6		6				6
Australia		7	6/7	5	G17/6		6	6		5	5																						
					G9/6																												
Burma		6	6/7	6	G22/6				4	6	6							6	6			6	6	6	6/6a/7	6	6	6					6
					G29/6																												
Cambodia	5		6/7																		6	6	6	6	6/6a/7								6
Ceylon	6	5	6/7	5					5	5		6		6				6	6		6	6	6	6	6/6a/7	6	6	6					6
Hong Kong	5	7	6/7	6				7	6		5	5	5								6	6	6	6	6								6
India		6	6/7		G9/5		3	7		4	6	5		5	6			5	6	5	3	6	6	6	6/6a/7	6	6	6	6				6
					G17/6																												
Indonesia			6/7				6			6	5						7	6	5	5	6	6	6	6	6/6a/7	6	6	6	6				6
Japan	5	7	6/7	4	G9/5		6	6	5	5	6		5	6			5	6	5	5	6	6	6	6	6/6a/7	6	6	6			3		6
Korea	6		6/7						5	6	6						6	6			6	6	6	6	6/6a		6	6					6
Laos	5		6/7																		6	6			6/6a/7								6
Malaya			6/7	6	G22/5					6	6							6			6	6	6	6	6/6a								6
					G17/6																												
New Zealand	4	5	6						6	5	5							6		5	6	6	6	6	6/6a	6	6	6	6				
Pakistan	5	5	6/7	6		5	4	6	5	4	5	6		6			7			6	6	6	6	6	6/6a/7	6	6	6					6
Philippines		7	6/7			5	5		5	6	6	5			6/7		6	6	5	5	6	6	6	6	6/6a/7	6	6	6	6				6
Taiwan (Formosa)	5	5	6/7						6	6	5			6				6			6	6	6	6	6/6a/7		6	6					6
Thailand	6		6/7	6	G22/6	5			5								5				6	6	6	6	6/6a/7	6	6	6	6				6
Vietnam	6		6																		6	6	6		6/6a/7								6

* Combined in investment series: Central America; × Under study; + Combined with Nigeria data; G3-29, see tables, pp. 106-107; F6, see table, p. 106

PUBLICATION SOURCES BY CODE NUMBER

:1 Basic Data on Economy
:2 Economic Developments in—
:3 Foreign Commerce Weekly
:4 Establishing a Business in—
:5 Utilities
:6 Foreign Investment Laws
:7 Foreign Investment Factors
:8 Living Costs and Conditions
:9 Licensing and Exchange Controls
:10 Import Tariff System
:11 Preparing Shipments to—
:12 Marking and Labeling Requirements
:13 Patents and Trademarks
:14 Pharmaceutical Regulations
:15 Food Regulations and Others
:16 Insurance Markets
:17 Travelers Baggage Regulations
:18 Distribution Data Guide
:19 U.S. Investments Abroad
:20 Foreign Trade—Fiscal Year
:21 U.S. Exports and Imports, monthly
:22 Direction of Int'l. Trade, monthly‡
:23 UN Commodity Trade Statistics‡
:24 UN Bulletin of Statistics‡
:25 International Financial News Survey
:26 International Financial Statistics
:27 Annual Report, Exchange Restrictions
:28 Balance of Payments Yearbook
:29 The EXIM Bank
:30 Series: Laws Affecting Business
:31 Estadistica (Statistical Studies)‡
:32 Distr. Statistics on 15 Countries‡
:33 UN Economic Surveys (area studies)‡

‡ *Includes study on U.S.*

ABOUT THE SOURCES

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scheduled "B" classifications. Alphabetical Commodity Index is included. Bureau processes a total of some 700,000 shippers export declarations each month. Complete details as to editing in coding function is reviewed in February 1957 issue of Foreign Trade Statistic notes; see pages 9 thru 16 inclusive

—**Office of Business Economics :18, :19** Also publishes occasional articles on U.S. International Trade & U.S. Balance of Payments in Monthly Survey of Business.

The United Nations, New York City

—**UN Statistical Office :22, :23, :24, :33** also Catalog of United Nations Publications —1945 1955 and supplements. This catalogs economic and other studies released by the United Nations. Special reference is made to Chapter XVII on International Statistics, pages 105–110 inclusive. Various statistical methods and sampling reports are indexed in this section. (**CODE :33** reviews the following publications: **Economic Survey of Latin America—1955** (new issue September 1957); **Economic Survey of Europe—1956** (just published); **Economic Development of Asia & The Far East—1956** (just published); **Economic Development of Middle East—1954–1955** (published May 1956); **Economic Developments in Africa—1954–1955** (published June 1956); **World Economic Survey—1955** (published April 1956).

The International Monetary Fund, Washington, D.C.

The Secretary's office :25, :26, :27, :28

—**Balance of Payments Yearbook**—This is a loose-leaf series of reports giving the annual position (1956, 1955, or earlier years) of 68

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0199 WISH TO PURCHASE RAW MATERIALS FOR THE MANUFACTURE OF STORAGE BATTERIES. BATERIAS UNIVERSALES LTDA., Carretera El Bosque, P.O. Box 147, Cartagena.

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0200 Purchase direct and agency sought for high-quality easily-operated automatic coin-operated vending and dispensing machines for hot or iced beverages, candy, food products, etc. and soda fountain and related drink-serving equipment. ETABLISSEMENTS CHARLIONAIS & CIE. 2 bis Rue Claire-Paulhac, Toulouse, Haute-Garonne.

0201 WISH TO PURCHASE DIRECT SMALL HOUSEHOLD ARTICLES. PINCOLOR, 8 Bis, rue Montessuy Paris.

0202 PURCHASE DIRECT OR OBTAIN EXCLUSIVE AGENCY FOR CONFECTIONERY, CHOCOLATES, AND CRACKERS. ETABLISSEMENTS FOULON FILS, 24 rue Vieille du Temple, Paris.

INDIA

0203 Wish to import machinery and equipment for establishing a mechanical toy manufacturing plant in India. GENERAL RADIO & APPLIANCES PRIVATE LTD., New Queen's Road, Opera House, Bombay.

TO SELL

BELGIUM

0204 EXPORT DIRECT OR THROUGH AGENT GOOD-QUALITY HANDMADE COTTON FLOOR MOPS. ROEGIES-GEERINCH, S. A, M 20 Chaussee d'Anvers, Lokeren.

ENGLAND

0205 High-quality woodworking machinery, including lathes, planer units, and circular saw units, for direct export. Illustrated leaflets with price information available. S. & G. SERGENT, Old Costessey, Norwich, Norfolk.

0206 Duffle jackets and coats, spun rayon and poplin jackets for export direct or through agent. Illustrated leaflet available. DUFFLE & DRILL CLOTHING LTD., Triumph House, 189 Regent St., London, W. 1.

0207 Christmas novelties for home decoration or store display made from polyfoil aluminum including cutouts, garlands, gummed gift tapes and wrappings; also hanging decorations. GREEN LTD., Packington Road, Acton, London, W. 3.

INDIA

0208 Sell direct or through agents tanned hides and skins, goat hair, wool, hooves and horns; food products; forest products; hand-loomed textiles. HINDUSTAN PRODUCE CO., P.O. Box 1913, Madras 1.

0209 Art brasswares, ivory jewelry, evening hand bags, silk scarfs and stoles; carved wooden furniture, copper wares, etc. Wish to appoint selling agents. TALWARSONS & CO. Post Box 83, Moradabad.

ITALY

0210 Good quality scarves and handkerchiefs—can supply 400 each monthly for export direct or through agency. Sample and price information in Italian available. GIULIO CROSATO, Corso Sempione 41, Milan.

0211 Large quantities of high-quality aluminum household articles and shop implements for export direct or through agents. D RASERO & C., 8 Corso Racconigi, Turin.

JAPAN

0212 Wish to export direct all grades and types of cultured pearls, from 3 mm. to 10 mm. in diameter. Available quantity depends upon size and quality desired. ATAKA SHOKAI, 43, Aioi-dori 3-chome, Abeno Ku. Osaka.

TO REPRESENT

BRITISH WEST INDIES

0213 Agency sought for dehydrated cake and pie mixes; all types of pulses, including red kidney beans, lentils, lima beans, and yellow split peas; fruit nectars; dried fruits; fresh fruit—apples, pears and peaches. J. N. HARRIMAN & CO., LTD., 61 Marine Square, Port of Spain, Trinidad.

CANADA

0214 Agency sought for photographic equipment, fishing tackle and sporting goods, surgical instruments, home workshop tools. GORDON W. GIMBERT, 125 Yonge Blvd., Toronto 12.

CHILE

0215 Have sales staff covering all of Chile experienced in chemical and engineering products. Desire agencies of American products. Cap 260 million Chi-$. PINTURAS CERESITA LTDA. Casilla No. 237, Santiago.

ITALY

0216 Wish to be appointed as exclusive agent for Italy by U. S. producers of beauty specialties not already on Italian market. DORIANA di Cesare & Armando Sala, 129 Corso Galileo Ferraris, Turin.

MOROCCO

0217 EXCLUSIVE AGENCY SOUGHT FOR BISCUITS FROM U. S. MANUFACTURERS LOCATED ON THE ATLANTIC COAST. ARMAND DELACOSTE, 71 Rue Coli, Casablanca.

NEW ZEALAND

0218 Agency sought for hardware, including screws, fittings, hinges, catches, and locks. SALES & SERVICES LTD., Kents Bldgs., 485 Khyber Pass Road, Auckland.

PERU

0219 Agency sought for equipment and machines for underground ore mining and open pit operations, concentrators and smelters. SOUTH PACIFIC INDUSTRIAL SUPPLIES S.A., P.O. Box 1572, Lima.

THAILAND

0220 Agency sought for pharmaceuticals, sulfa drugs, and vitamin preparations. B. L. ANN LTD., 780 Phanurangsi Road, Burapha Palace District, Bangkok.

TO BE REPRESENTED

HONG KONG

0221 Wish to appoint sales representatives for made to measure men's suits, overcoats, and other garments, well-tailored from English materials. Catalog furnished. JAMIE C. TSIEN & CO., INC., 20 Stanley Street.

THAILAND

0222 Wish to appoint distributors for our famed handmade bronze table cutlery, preferably in New York. THE PRATIB COMPANY LTD. 1277 Chareonkrung Rd., P. O. Box 533, Bangkok.

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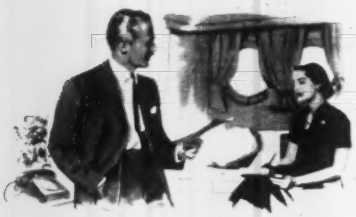

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Internationally famous food and flawless service are also part of the fun of traveling Cunard. (Dress for dinner or not—as you please!) That's true whether you're on one of the magnificent Queens, or any of the other ten luxury Cunarders. Business is a pleasure when you go Cunard!

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The investment in time is something else again. Classifying and filing fresh information requires several hours of work each week. However, if the planned scope of research is extensive, it would be desirable to post the new releases by country, subject matter, and date, using the several tables provided in this study as a pattern for maintaining a master index. Blank tables have been prepared by us on all five studies and are available to readers on request.

Research for Profit

This reference round-up may not give you all the facts that you need, but will at least make possible a methodical analysis of available facts as opposed to sophisticated fancies. Here is the first phase of a "do-it-yourself" program that, at worst, may confirm resolutions to avoid foreign entanglements; at best it may uncover new profit areas now buried in sheaves of statistical papers.

—A.O.S.

Stream of Consciousness In an Outer Office

Just who does old Willoughby think he is?
He can't get away with that!
He may be my boss but that note of his
Is proof that his head is fat

Oh he'll know better when he has found
I'm not the type he can push around.
I'll put old Willoughby through a ringer
I'll pound his desk and I'll shake my finger

Whenever I wish I'll make it clear
I could do much better than I do here.
I'll say to him, "Willoughby, don't be funny.
My salary's peanuts, it's hardly money.

So stop that guff or I'll get my hat.
For a couple of cents I'd leave you flat.
I'm not a man to avoid a row.
You say he's ready to see me now?

"Oh, Mr. Willoughby, I agree.
I read that memo you sent to me.
You've cleared things up so I see the light.
Mr. Willoughby, you are right."

—James Menzies Black

ABOUT THE SOURCES
continued from page 111

countries in their net balance of payments resulting from the inward and outward flow of merchandise, travel expenditures, transportation and insurance charges, investment income, capital investment, government debits and credits. EPU settlements where they apply, loans, gold reserves.

Annual Report on Exchange Restrictions—Contains summary of exchange restrictions. Details official rate of exchange, designates the authority of exchange, classifies nonresident accounts, prescribes import and export payments and proceeds, movement of capital and profits, stipulates allowable payments for "invisibles," that is expenditures for transportation, export commissions, services, and so on.

The Pan American Union, Washington, D.C.

—**Organization of American States** :30 publishes **Inter-American Juridical Year Book** in series by country as detailed in Table on page 110.

—**Inter-American Statistical Institute** :31 **Estadistica**, the official journal of the Institute reports on statistical developments of all countries in the Western Hemisphere (except foreign dependencies), availability of data. Also presents articles encouraging the adoption of improved methods in statistical compilation in both social and economic fields. News notes of government statistical offices and other statistical organizations appear from time to time. **Catalog Pan American Union Publications** reviews the various series and studies and regular publications of the Pan American Union. **Estadistica** Index—1943 to 1953, with supplements to 1955, is issued irregularly and is arranged alphabetically by country and subject matter.

The Export Import Bank of Washington, D.C.

:29 Semi-annual report of the Export-Import Bank of Washington, D.C., relating its commitments, disbursements, and repayments of foreign countries and foreign companies. Reports loans, guarantees on U.S. commercial bank loans, guarantees on letters of credit to U.S. exporters, guarantees on U.S. branch plants. Activities with 68 foreign countries are tabulated.

The International Chamber of Commerce, U.S. Council, New York City :32

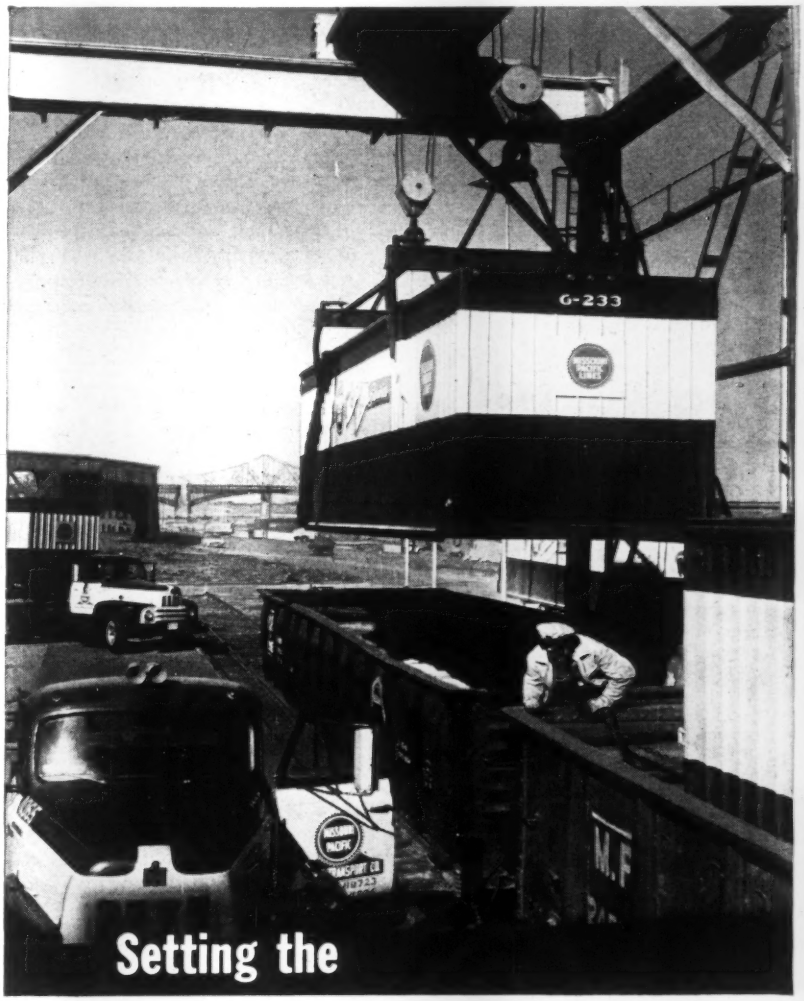
American exporters are urged to mark

United States of America

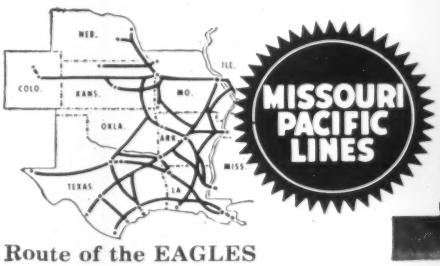
on external containers of goods shipped abroad

Senate Concurrent Resolution No. 40, adopted July 30, 1953, suggests that such marketing will help to publicize American-made goods overseas.

The wheels don't go . . . in Mo-Pac's new twist on *Truck-Rail* service. Shipping only the trailer body saves precious minutes and dollars. It's Mo-Pac . . . it's modern.



MODERN PACE in transportation



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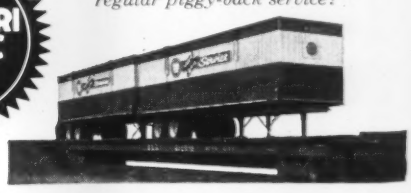

How Much Did Those Few Minutes Cost?

The production engineer called purchasing for the third time in three days. The shipment of plastic parts promised, still hadn't arrived — and then at five minutes of five, a truck rolled up to the loading docks.

Fine — it meant a little overtime to see the parts unloaded and taken thru receiving — a short delay — but all was o.k.

It may have been o.k. from purchasing's point of view. Seemingly not much harm done. But as top management viewed the problem, this short delay had cost plenty — in overtime — idle men — idle machines — halted production. **It had cost plenty.**

It's a Lor-El policy that promised deliveries must be kept — at any cost.

We would like to tell you more — about the quality of our molded plastic parts — about skilled die makers and about our up-to-date facilities — and we will — if you call or write, for we invite your inquiry.

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continued from page 44

taking unearned discounts is not only unfair to the supplier, but costly to the Government in the long run as well: Unauthorized deductions tend to increase prices on future contracts, make for bad Government-contractor relationships, cause some contractors to refuse to bid in the future, and run up costly paperwork when the supplier insists on a refund.

Today, as a result, Government agencies are under instruction to remember they are no better than other customers and may discount a payment only if they observe the conditions under which the discount is offered. Considering the majestic manner in which big governments everywhere are inclined to deal with their suppliers, and especially the smaller ones, this seems like a big step forward in justice, and even in economics.

Paying as They Go

A third way in which recommendations of the Cabinet Committee and the Task Force—the latter set up by the General Services Administration (GSA)—have made things easier for the small company is in making possible "progress payments," so that a supplier or contractor need not wait until his contract is completed before receiving any payment. He may now receive a percentage of his costs as his work progresses.

The regulation establishing a system of progress payments applies to fixed-price contracts for supplies and nonpersonal services, and in general is to be followed where contracts amount to more than $10,000, unless the procuring agency considers it impractical in a given case. The contractor will be able to obtain up to 90 per cent of direct labor and material costs he has incurred or up to 75 per cent of total costs for work done under the undelivered or uninvoiced portion of a contract. The Government already had a system of "partial" payments for invoiced goods delivered and accepted or services rendered and approved.

Additional protection for the small business is the provision that request for progress payments shall not be a handicap or adverse factor in awarding contracts and shall not be regarded as an indication the contractor is any less responsible or competent to carry out a contract than if he did not ask for them.

The Task Force has made or is preparing recommendations for other alleviations of handicaps to the small business concern. For instance, an invoice for supplies furnished or services performed would not get a contractor his payment two months ago. He had to include a certification that the invoice was correct and just and that payment for it had not been received. This is as if your grocer or your landlord not only had to bill you, but had to supply a notarized statement that the bill is legitimate and due. The Comptroller General has eliminated the need for certification, thus reducing paperwork.

Use of petty cash funds for some buying has worked out well, the Task Force finds, and its expansion would eliminate more paperwork. It has also found that "unduly numerous and complicated" requirements for packing, marking, and packaging have resulted in rejection of supplies that otherwise were acceptable. It proposes to work out simplified requirements.

Areas for Recommendations

Other faults that have been brought to its attention are unrealistic delivery schedules; insufficient time to prepare and submit bids; unavailability to bidders of drawings and specifications; invitations for bids that are too complicated, too terse, or ambiguous; quantities not broken into suitably small lots. Improvement of Government practice in any of these respects would help the small business man, especially, and the Task Force contemplates recommendations in these areas.

Wide variation in construction and supply contract forms, in purchasing practices of local agency offices, and in inspection procedures all give many small businesses a headache. The Task Force is working on recommendations to make them uniform; some changes may require new legislation. Also under study is how to get more small businesses into the Government-sponsored research and development programs, now chiefly engaged in by larger concerns.

A good deal had already been done for small business by the Small Business Administration, of course, be-

fore the Cabinet Committee or the GSA Task Force was set up. And probably the best place for any small company to begin its hunt for Federal business or Federal loans is the nearest of the fifteen regional offices of the Small Business Administration or their 22 branches.

These offices can tell how to get on bidders' lists, how and where to apply for Federal contracts, which large contractors are looking for small subcontractors. They give technical and administrative advice and counseling; they have their own leaflets, booklets, and brochures on almost any subject on which a business man might seek the aid of a consultant—if he could afford one. They cooperate with local colleges in establishing development courses for management. They work with local banks in arranging credit, initiate Government participation in small business loans that the banks do not want to carry all by themselves, and in some cases the regional offices have final authority to approve Government loan-participation or all-Government loans. They can even tell whether you are a small business under the law, and can certify their findings.

Division of the Labor

The SBA's principal work in Washington is to negotiate with procurement agencies to have contracts earmarked for small business—through February 1957, $1.5 billion in purchases had been set aside for such award—and to prepare aids for small concerns and devise means of helping them more. The chief jobs of the regional and branch offices are to guide the business man in search of loan or contract and to persuade prime contractors in their areas to set aside subcontracts for smaller companies.

Just as a Congressman's home office is the best place to make the initial contact in seeking a legislative end, the SBA office in the field is the best starting point in seeking to do business with the executive agencies.

One other important resource of the small business man, intent on either business, is his trade association, an aid often overlooked. The best of them are well informed on Federal procedure and can be of great help. It is only sensible to use them, if for no other reason than to increase the returns on one's membership dues.

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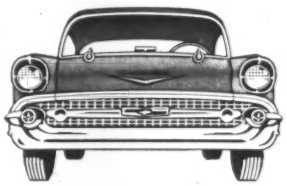

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For information about the Federal AUTOPILOT address Federal Telephone and Radio Company, a division of IT&T, Clifton, N. J.

Supervision, production, maintenance, even time study, is incentive-paid in this plant

"THE ENGINEERS may be wrong; let's find out," Carl Leitten suggested to an employee who had complained that the standard proposed by a time-study man was "completely impossible."

So Leitten, executive vice president of Electro Refractories & Abrasives Corp., Buffalo, N.Y., hung a clock on the man's machine and told him to time himself at his own chosen pace. The worker did, and he was surprised to find that he not only met the proposed standard but exceeded it by enough to earn himself a good premium.

That was one sale made, and other employees were sold as carefully. The attitude and the process were typical of Electro's methods in installing—and maintaining—a system of individual wage incentives that was launched in 1943 and has at length been extended to every production worker, direct and indirect, and to every supervisor and superintendent in the company's main plant in Lackawanna, N.Y., and to most of those in its Canadian subsidiary.

Even the eight-man standards staff that administers the incentive plans is paid on an incentive basis of its own. Its members so admired the premium pay they saw production workers earning that they asked for a similar pay basis so that they might ride the gravy train as well.

Leitten expects some day to see every employee, even accountants, on some form of incentive.

One means by which the company's incentive system is maintained in good running order is the daily posting in each department of each man's premium earnings for the day before, with a cumulative total between paydays. This is a practice that might eliminate employee "beefs" about a good many incentive plans, which the workers find too complicated to figure out, so that they don't know what their paycheck will be until they see it. Suspicion and resentment often result.

There are several aspects of Electro's incentive plans that make it an interesting case study for other small companies interested in increasing productivity, lowering costs, improving supervisory performance, and bettering employee relations:

- Electro Refractories & Abrasives Corp. is no industrial giant. It has about 300 employees in its main plant.
- Its incentives are not a standard program, "bought" in one piece and installed as a unit, but are the result first of trial and error and then of improvements based on a dozen years' experience. New plans, extending the incentive principle to supervisors and superintendents, were developed after the initial production workers' plan had proved itself.

In Labor Contract

- The production workers' incentive plan is incorporated in a labor contract between Electro and a local union of the United Steelworkers of America, AFL-CIO. Employees now average about 30 per cent over base pay and a few very able workers almost double their base wages.
- Monthly output per production employee increased from $1,340 in 1943 to $2,960 in 1956. The company figures only about half the increase is due to higher selling prices. It estimates that "savings" in the production department, due to incentives, totalled $1,932,531 up to the end of last March.

That total represents "savings" in one department since 1943, in three since 1944, in one since 1945, in one since 1947, in one since 1950, in one since 1951, and in two since 1955. "Slow and easy" has been the company's motto; the essence of its success with incentives has been the

"I hate to fire a man without provocation, Harris. Disagree with me . . . start an argument . . . call me a nasty name . . ."

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is right only when
it fits your
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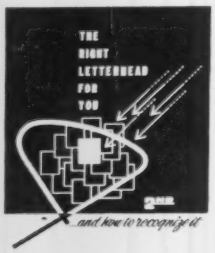

Good design and good intentions are not enough. Your letterhead must be appropriate for your firm and represent it in such a way that . . . but why go on? The full story is in the second series of "The Right Letterhead for You." Ask your printer for your free copy. Then put your knowledge of your company into your letterhead.

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care with which they have been introduced and maintained.

Electro tried a group incentive plan first, in 1941, but two years' experience proved it unsatisfactory. The plan was based on past performance, labor costs being computed for each product by production stages. If the workforce could cut costs below these standards, 60 per cent of the savings went to the workers, 40 per cent to the company.

Four Disadvantages

The plan failed, Leitten says, in part because each department was treated as a whole; laggards could ride on the coattails of good producers and receive the same incentive bonus without putting forth any greater effort than before. Contrary to the experience of some employers, Electro's finding was that the more productive employees were unable or unwilling to "police" the others into doing a fair share of the work.

Furthermore, the department with the best prior record had the hardest time improving its output to earn a bonus; the previously inefficient departments could easily show big improvements. A third weakness was that when management introduced new equipment, costs were reduced and employees received incentive pay without exerting further effort.

Finally, there was great resistance whenever management attempted to improve product appearance or quality, because the change meant a reduction in incentive earnings.

When the departmental incentives were abandoned in 1943, Electro called in Dyer Engineers, Inc., Cleveland consultants, to develop a sounder plan. (C.D. Dyer Jr., president of the Cleveland company, has since become a director of Electro.) The consultants installed, step by step, a 100-per-cent-premium, standard-hour plan, in which the unit is a "standard" minute's work, based on a minute of rated effort with personal and fatigue allowances. For all production over 60 units an hour, the employee receives a 100 per cent premium. The incentives are applied to current base pay, and as new rates are negotiated, premium pay is calculated on the new base.

The incentive system's achievement, in giving the average production employee a 30 per cent bonus is particularly impressive in view of the fact that the engineers estimated that

the output of the average employee was 30 to 40 units an hour before the plan went into effect, or 50 to 66 per cent of the standard, which is now exceeded by 30 per cent. This finding made it no easy task, either, to introduce the new standards. Probably only the willingness of top management men to go into the plant and personally double-check the time-study men's findings, letting the employee demonstrate *his* point, put the plan over.

Supervisors, who played an important role in explaining the plan and winning acceptance for it, as well as in determining the proper sequence of operations, were put on an incentive program in which premium pay is based on labor savings. Three factors are considered: the average performance of the men under the supervisor in terms of unit hours of work, the percentage of his crew that is on standards, and the percentage of possible savings achieved. For supervisors, control sheet calculations are made weekly; for superintendents, monthly.

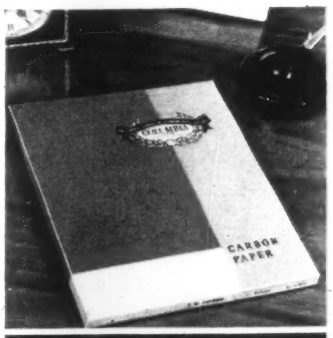
Superintendents' Plan Broadened

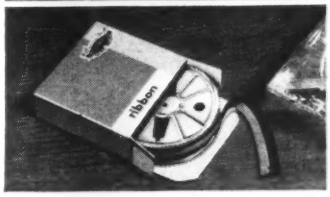
The incentive system for superintendents was extended, after the original plan had been operating successfully for several years, to give control over other production expenses than labor. Raw materials, supplies, utilities, maintenance costs, and the like are embraced in this plan. Costs in a reference period and an estimate of possible savings are established for each.

Raw materials standards are based on cost as a percentage of the sales dollar, modified by a utilization factor that controls rejects, spillage, and so on. Others, like fuel oil, are based on the cost of firing 1,000 pounds of ware, or some similar measure. The superintendent may accumulate premium pay units on any of the charts covering these separate items—and he may lose them, too, where performance falls below the benchmark.

Half of any premium pay earned is paid quarterly, and the balance is held until the end of the calendar year and completion of the company's audit. How well the plan has worked is indicated by experience in the Canadian subsidiary where it was first introduced: When only production workers were on incentive, savings of approximately $4 a ton were effected; when supervisors and

Appearance Always Counts





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superintendents went on incentives, savings mounted to $15 a ton.

The eight-man standards staff—two time-study and rate setting men, three checkers, and three clerks—calculates payrolls and incentive earnings for production workers, keeps daily check sheets on their output (most jobs are short runs), sets standards for all new jobs, builds up a set of company-experience standard times to make future estimating easier, and keeps the control sheets for supervisors. For each kind of activity, it has standards which it may meet or beat, in order to earn premium pay.

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Last workers to come under incentives were those non-productive or indirect jobs—kiln firemen, supply men, truckers, material handlers, maintenance workers. Men who unload railroad cars are paid according to tons handled per hour, modified by factors for kind of material, type of container, storage locations. A lift truck operator's work is measured by the number and output of production workers he serves. Men operating equipment whose output is limited by the capacity of the machine are given small in-between jobs, such as making out tags or heading barrels, which enable them to earn premiums.

For maintenance workers, allowable maintenance hours are determined monthly in accordance with the number of productive units at which the plant operates. These allowable hours are the standard; the men can meet or beat them. Where there is new work, such as installation of machinery or building construction, an estimate of the hours required is worked out by management and the supervisor.

In this case, the department can be debited for excess hours as well as credited for beating the standard. Similarly, because maintenance is on a preventive basis, the department can be debited for production-department hours lost because of machine breakdown. If the production men idled by the breakdown can be employed on other production work, only half the lost time is charged against the maintenance department.

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ETHICS AND EXECUTIVES

continued from page 45

thoroughgoing set of ethical values will convey these values to people throughout his organization; further, his influence will be felt in the host of external relations that are among his responsibilities. Relationships with suppliers and customers, community and state officials, educators, labor union officials, foreign business men—all are influenced for better or worse by the executive's daily actions.

Not only when a new product is introduced or when purchasing requirements are drastically revised is there ethical and moral interplay; a "routine" sales or purchasing conference, multiplied many times, will have a tremendous long-run effect on both the executive himself and those with whom he is dealing.

Temptations of Power

Unfortunately, the temptations for minor slips in the value structure are greatest at this "routine" level. A position of power often makes a person arrogant or pompous; successful administration of a complex organization can readily give a feeling of infallibility unjustified by facts.

A minor slip by a person in such a position is rarely catastrophic; the ethical nature of the situation usually goes unnoticed. But the effect of such minor slips, unfortunately, is cumulative. At last the executive loses his perspective, and his aura of authority tends to destroy the values of those whose lives he touches.

Consider these examples:

- President X founded his company 30 years ago and has made it one of the leaders in its field. His pride in this accomplishment is great. But he has expected equal pride from his key subordinates. Childless, he continues to maintain the killing schedule he followed in the company's early years. His key men must "voluntarily" approximate his schedule; one who does not is considered to lack interest in the company. His executives first chafe under his influence, but soon they accept it and demand the same devotion from their subordinates.
- President Y, one of the most influential men in his town because of his company's dominant position in the area, becomes chairman of his church's finance committee. He himself contributes generously and he

gets substantial contributions from his friends. At church meetings he frequently makes known his belief that the church should become more of a "social institution"; the minister and many members disagree, but are reluctant to speak out. Finally the church's character is fundamentally altered over the unvoiced objections of many of its members.

• Vice President Z prides himself on the executive development program he instituted in his division. He attends most of the sessions, often making known his own opinions. He asks the participants in each conference to evaluate the program's worth afterward in a letter directly to him. The responses are uniformly favorable, with heavy emphasis on the ideas he himself expressed.

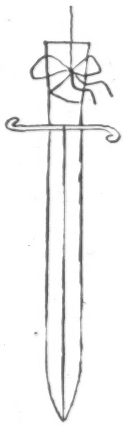
Each of these three examples shows certain "human relations" errors—the executive was failing to communicate, was not associating himself with the group, was not "listening," and so on. But even had he brought these outward manifestations under control—as he might have had he taken human relations courses and practiced all the techniques well—he would still have had an overriding duty to face up to the ethics of each question.

More than Techniques

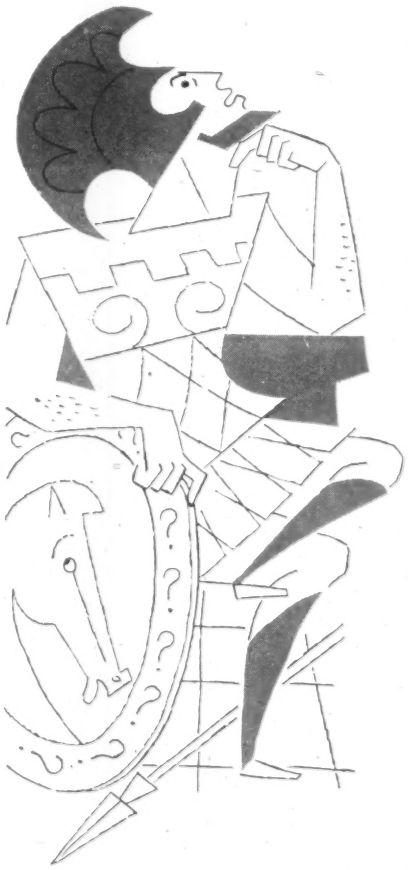
Current human relations courses seem to hit hard on the necessity to "work through people," to gain "positive motivation." The executive is exhorted to develop two-way—or three-way, or even four-way—communication, is told to "perceive the totality."

But little or nothing is said about the set of personal values the executive is to *speak out of* in applying these principles. In the final analysis, everything a person does or says manifests his own set of personal values. One cannot espouse ethics for catastrophic alternatives while resolving "small" issues amorally. And one great vacuum in the human relations field today is the result of its failure to recognize the need for morality in small decisions; it offers "principles" by which one may achieve certain results, but fails to stress that they must be applied on the basis of a firm set of personal values. A decision based solely on momentary considerations or group pressure is amoral.

Everything an executive says and does to subordinates, superiors, and



DAMOCLES HAD OVERHEAD PROBLEMS, TOO. . . .



Dangerous overhead burdens are as big a threat today as they were centuries ago. Long ago, Damocles proved there's more truth than poetry in the saying—"uneasy lies the head that wears the crown".

We couldn't have done too much for poor old Damocles, but we might be able to offer you some assistance.

If your peace of mind has been disturbed by overhead worries, give us a call. Magnaflux nondestructive test systems serve as a new production tool that cuts costs by reducing avoidable waste in production operations. These test systems spot defects in materials, and manufacturing variations, before they become major profit drains—before they start costing *extra* in high reject rates, excessive re-work or wasted manhours and machine time.

Moral: If you would cut costs without cutting throats, then cut your waste, from reject losses and other profit drains.

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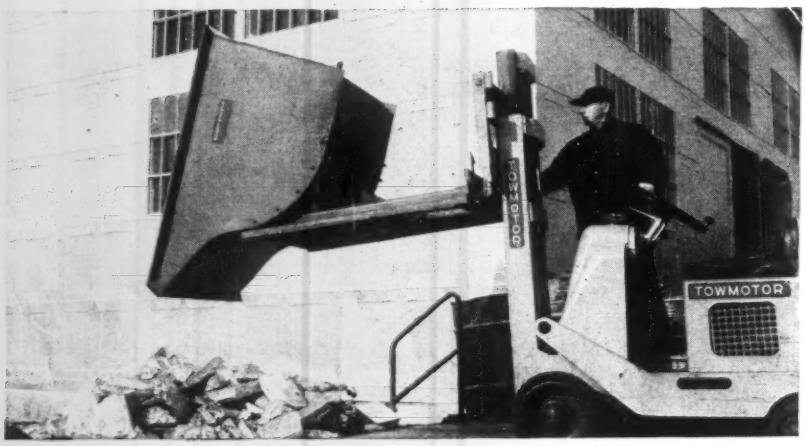

Self-Dumping Hopper increases plant efficiency

Handling costs have been cut sharply and plant efficiency has been increased for Henning Brothers & Smith, metals refiners, Brooklyn, N. Y. Bulk materials handling is now standardized by using nine Roura Self-Dumping Hoppers—doing several different jobs throughout their plant. These maintenance-free Hoppers, attached in 3 seconds to any standard lift truck, dump aluminum scrap into furnaces, move 400-600° zinc ingots to a storage area, and are loaded with hot brass ingots from a conveyor belt. In each job, the entire operation is handled by one man. He just flips the latch and the Hopper dumps itself, rights itself, and locks itself.

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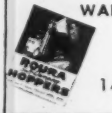

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persons outside the company, he does and says out of his own mind and heart. Each action is in a small way a decision in ethics, and the cumulation makes up his character.

Such a cumulation may look widely different in different men. But its essential qualities are readily perceived. It is remarkable how quickly and intuitively subordinates can sense a man's ethics. Over the long run, humility, kindness, trustworthiness cannot be projected unless they are genuine. And firm and lasting human relations can be effected only through application of principles within an ethical framework. A man who turns his human relations "principles" on and off at will is usually found lacking over the long run.

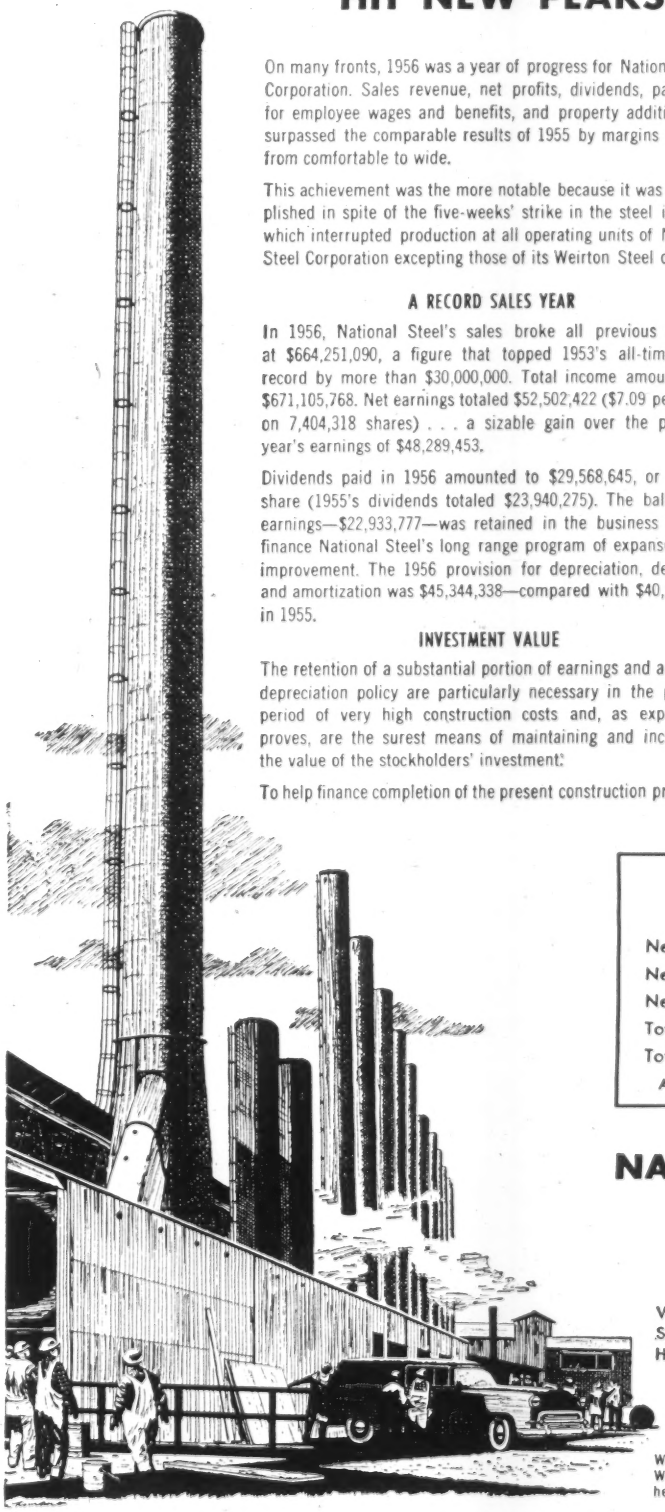
What Do You Really Worship?

It would be presumptuous to set forth a "handy list of personal values" that could be applied in any situation; in fact, the tendency to compile such lists is one of the major weaknesses in human relations training.

But perhaps we may say this much: A man puts first that which he worships. If he worships power or influence, his day-by-day decisions will invariably reflect that fact, no matter how carefully he wraps them in cloaks of selflessness and service. And if he places first his religious faith, his decisions will reflect their religious base even if he tries to conceal it. Since all religions have a common ethical base, it does not matter for our case what his religion may be. What does matter is that any decision, big or small, be made in the conscious realization that it represents an entire value structure.

"I will not put it in writing! That was an estimate, not a bid."

NATIONAL STEEL'S SALES AND OPERATING REVENUE HIT NEW PEAKS FOR 1956



On many fronts, 1956 was a year of progress for National Steel Corporation. Sales revenue, net profits, dividends, payments for employee wages and benefits, and property additions, all surpassed the comparable results of 1955 by margins ranging from comfortable to wide.

This achievement was the more notable because it was accomplished in spite of the five-weeks' strike in the steel industry which interrupted production at all operating units of National Steel Corporation excepting those of its Weirton Steel division.

A RECORD SALES YEAR

In 1956, National Steel's sales broke all previous records at $664,251,090, a figure that topped 1953's all-time sales record by more than $30,000,000. Total income amounted to $671,105,768. Net earnings totaled $52,502,422 ($7.09 per share on 7,404,318 shares) . . . a sizable gain over the previous year's earnings of $48,289,453.

Dividends paid in 1956 amounted to $29,568,645, or $4 per share (1955's dividends totaled $23,940,275). The balance of earnings—$22,933,777—was retained in the business to help finance National Steel's long range program of expansion and improvement. The 1956 provision for depreciation, depletion and amortization was $45,344,338—compared with $40,235,237 in 1955.

INVESTMENT VALUE

The retention of a substantial portion of earnings and a liberal depreciation policy are particularly necessary in the present period of very high construction costs and, as experience proves, are the surest means of maintaining and increasing the value of the stockholders' investment.

To help finance completion of the present construction program, bonds were issued in 1956 in the amount of $55,000,000—increasing total long term debt to $110,000,000. It is anticipated that no further financing will be required for this purpose.

NEW CONSTRUCTION BOOMING

Property additions—including investments in affiliated raw materials companies—totaled about $109,000,000. An estimated $95,000,000 will be spent to complete National's building projects this year. With the completion of the current construction program (early in 1958), the Company's annual steel-making capacity will reach a minimum of 7,000,000 tons.

This program embraces the installation of major new facilities, plus improvements and additions to auxiliary facilities and equipment. Representative of physical improvements are four major facilities added at Weirton Steel division in 1956, three of these setting new steel industry records for facilities of their type. Projects were completed in many departments at Great Lakes Steel Corporation, too—and 1957 is seeing the completion of new installations of great importance at various National Steel operations.

JOBS AND PAYROLLS UP

In line with National's other advances, employment and payrolls also took a forward step in 1956. The average number of employees was 29,204 compared with 28,889 the year before. Total wages and salaries came to $177,493,191 compared to $164,217,372 in 1955. Employee benefit payments totaled $17,111,260, an increase of approximately $3,500,000 over similar payments the preceding year.

For National Steel, 1956 goes into the record as a year of solid achievement.

1956: A GAINFUL YEAR

	1956	1955
Net sales	$664,251,090	$622,018,919
Net earnings	52,502,422	48,289,453
Net earnings per share	7.09	6.54
Total employment cost	194,604,451	177,913,219
Total dividends paid	29,568,645	23,940,275

A copy of our Annual Report for 1956 will be mailed upon request.

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Weirton Steel Company • Great Lakes Steel Corporation
Stran-Steel Corporation • The Hanna Furnace Corporation
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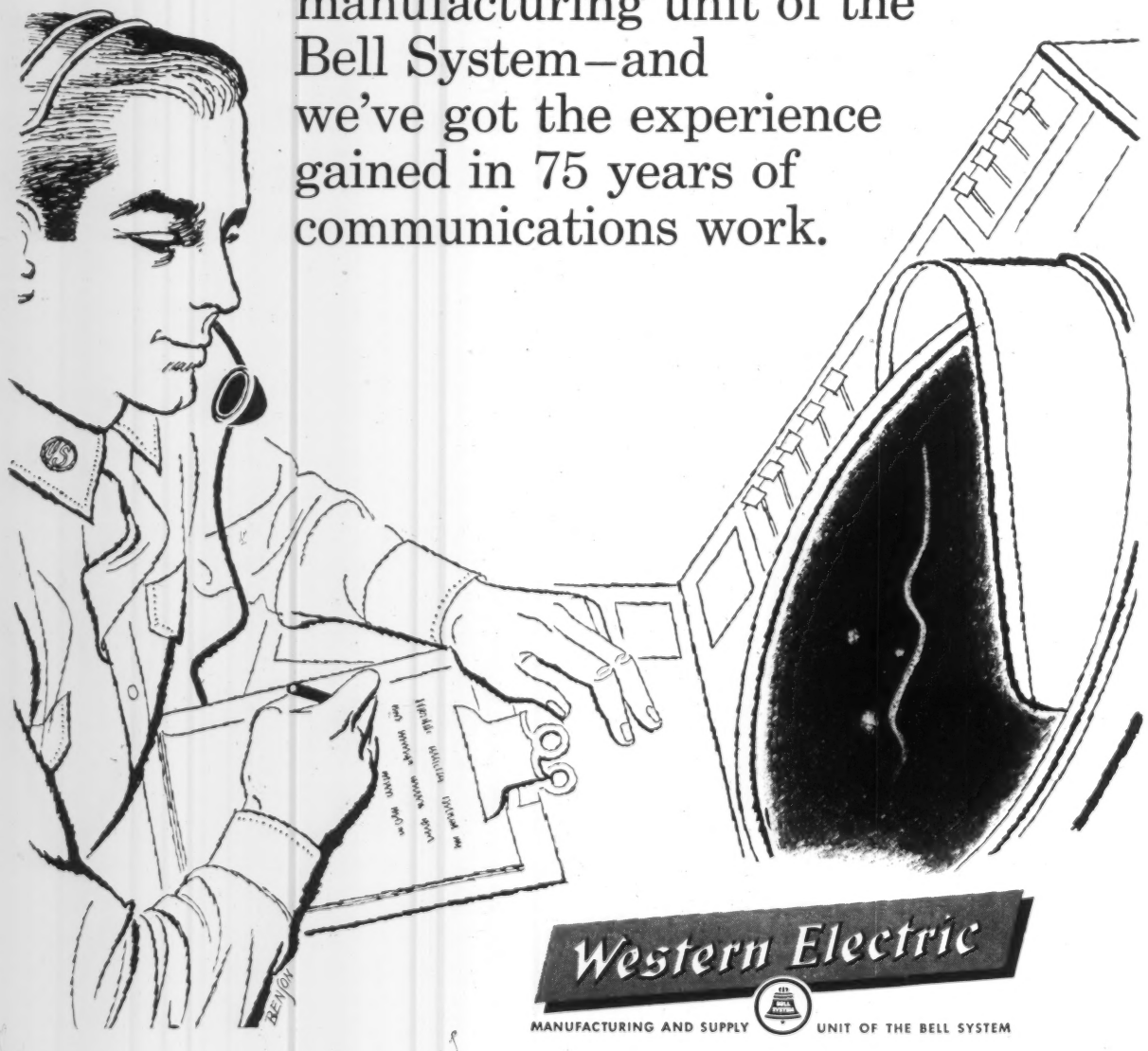
Because these projects pose problems like the ones we deal with in our role of manufacturing unit of the Bell System—and we've got the experience gained in 75 years of communications work.



Western Electric

MANUFACTURING AND SUPPLY UNIT OF THE BELL SYSTEM

Devaney Photograph

Educating business to automation

THE TECHNICAL achievements and promises of integrated data processing are admirably suitable for visual presentation, and it's disappointing that more and better films have not been produced on the subject.

The National Office Management Association has come up with a new film that does a simple if somewhat pedestrian job of explaining the basic benefits of an automatic data transcribing system. Common manual procedures used by most offices in an order-entry system are first detailed, then contrasted with an automatic system for the same jobs.

Though providing a sound little introduction to IDP, *Integrated Data Processing* (35 minutes, color) could have been much improved by a more imaginative use of the film medium.

Prints are available from NOMA, Willow Grove, Pa.

A more interesting approach to illustrating the potentials of IDP is achieved in *Electronic Computers Improve Management Control* (15 minutes), produced by the University of California, Extension Division.

Animation is used to show a predicament in a manufacturing company—a large order cancelled because of delays in paperwork. After live film provides a general picture of modern business machines, the hypothetical case is shown being processed under an automatic production control system.

The value of the film is decreased by the fact that it is too hypothetical. Automation is shown as a potential cure-all for clerical delay and errors, and no accompanying problems are mentioned. Automation has reached the stage now where business men demand more than simplified generalities. What is IDP actually doing for management today in terms of cost reduction and efficiency? A film providing a concrete answer to this question in detailed case histories would do much to bring the facts of automation down to a more practical business level.

Prints of this film are available for sale and rental from the Educational Film Sales Department, University Extension, University of California, Los Angeles 24.

How to organize your selling time

Films have played a major part in Republic Steel's sales training program for its pipe distributors. The company's latest film in the series is

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solve 'em . . .
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. . . put on this
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The salesman doesn't have to be time's fool • • • with a plan that's on *one* paper he can find.

Little Time for Henry (20 minutes, color), an amusing cartoon illustrating how a salesman should and should not fight time.

The lesson Henry learns the hard way includes eight major points:

1. Make a schedule that always includes two important calls per day. Keep the time for less essential calls more flexible.
2. Call on at least two brand-new prospects every week.
3. Find out the best time to call on each customer, and find out the right procedure to use in calling.
4. Make an appointment. Cultivate the No. 2 man—whoever can help get you to your man quickly.
5. Know what you're going to talk about when you go in, and leave when your business is finished.
6. Keep your schedule always with you, and jot down a summary history of each call.
7. When you think you're through for the day, make one more call.

Distribution of the film, a Wilding production, will be limited, but inquiries for loan may be addressed to the Orders Makers Institute, Republic Steel Corporation, Cleveland 1, Ohio.

Today and yesterday in the stock market

The history of the American Stock Exchange is entertainingly portrayed in *Behind the Ticker Tape* (21 minutes, color).

By showing in detail the growth of the old Curb Market, the film makes the facts of today's Exchange understandable to the layman.

Prints are available free from United World Films, Inc., 542 South Dearborn St., Chicago 6.

more reviews on page 130

In Curb Market days, colorful coats and hats identified brokers to their window clerks.

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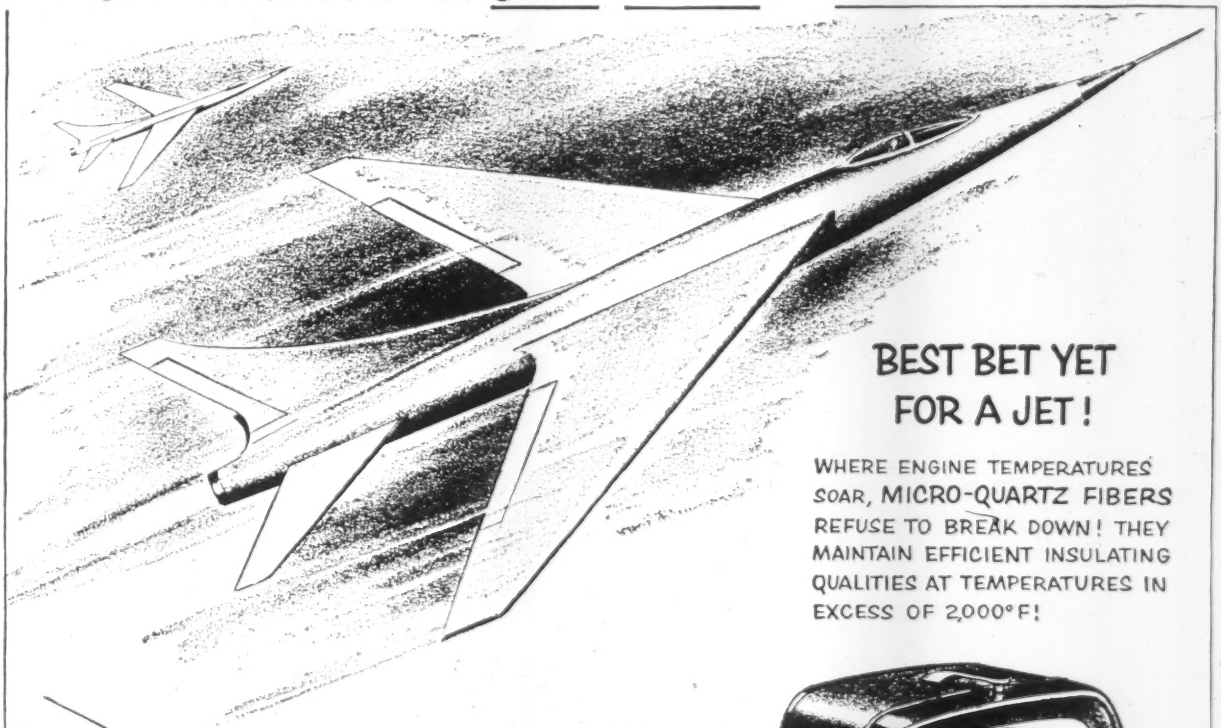

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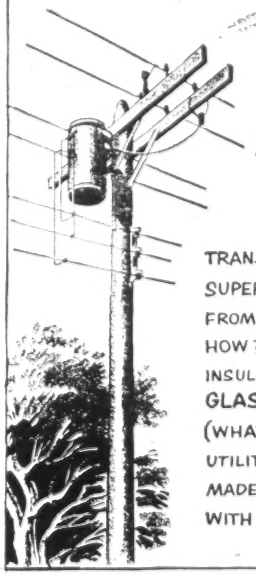

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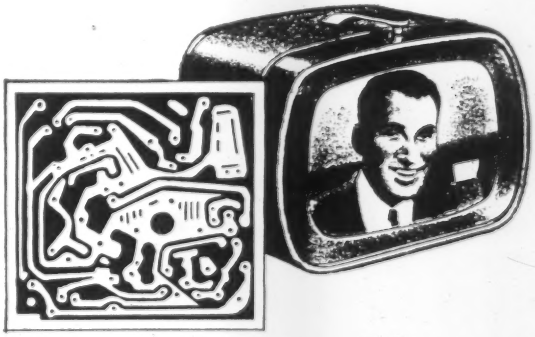

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Bell System's latest: fantasy and fact

Two new Bell System films are samples of the worst and the best in commercially sponsored films.

Once Upon a Honeymoon (14½ minutes, color) represents a contrived and embarrassingly poor attempt to produce a screen musical. The plot concerns the attempts of a guardian angel (who communicates with his heavenly superiors via telephone) to get a songwriter and his wife off to a belated honeymoon. The action and characters are unconvincing enough to make the awkward commercialism appear skilful by comparison. Made in Hollywood by Jerry Fairbanks Productions.

Bell Solar Battery (12 minutes, color) is, on the other hand, a tightly constructed and intriguing little documentary, as educational as it is entertaining.

The film first illustrates how the sun's energy is a basic source of life and energy on earth, then shows step by step how Bell found a means of harnessing this power to produce an electrical current.

Made by MPO Productions, this film will be available through the Bell System film libraries.

Birth and development of today's television

The Radio Corporation of America was not the only pioneer of modern television; so the *Story of Television* is only RCA's story. Nevertheless, the film manages to compress a valuable amount of technical and historical information into a running time of 27 minutes. The film switches from black and white into color as the development of compatible color television is explained. Animation reveals concisely the science of TV transmission and reception.

Prints are available on free loan from the producer, William J. Ganz Company, Inc., Division of Institute of Visual Training, 40 East 49th St., New York. —G.A.

GOVERNMENT FILM CATALOG

A new catalog of U.S. Government films for industry is now available gratis from United World Films, Inc. (Government Dept.), 1445 Park Ave., New York. The listing covers 364 subjects in the areas of management, engineering, supervision, and training.

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She wants to know what we did with the $401,518,000

RENEE REIFEL is a secretary in the marketing department of Union Oil. She is also—through our Employees' Incentive Plan—one of our 5,906 employees who hold shares in the firm.

This entitles her (along with 49,719 other people who hold shares in Union Oil) to a report on the 66th year of business of the 47th largest industrial company in the country.

In 1956 our customers paid us $401,518,000—a new record.

How we spent it

We spent 72.1% of this—or $289,481,000—with over sixteen thousand other companies and individuals with whom we do business.

The more than 1000 tax collecting agencies took another 3.7%, or $14,830,000. This does *not* include the $74,120,000 we collected from our customers as fuel taxes and turned over to governmental agencies.

Wages and other benefits for our workers and their families amounted to 15.7%, or $62,966,000 of our income.

This left 8.5%—or $34,241,000—as net profit. Slightly more than half of these earnings—$18,261,315—were paid in cash dividends to Renee Reifel and our other 49,719 share owners.

The balance of our net earnings—equal to 4.0% of our customers' dollars—we reinvested in the company in order to stay in business.

The new ownership

It seems to us this report does more than give an account of our stewardship to Renee Reifel and our other owners.

It points up the broader base of ownership of American business. In the last four years, for example, the shareholders of all companies listed on the New York Stock Exchange increased by 33%. Union Oil did even better—41%.

This could happen only in a freely competitive economy that encourages and rewards individual effort.

* * * *

YOUR COMMENTS ARE INVITED. *Write: The Chairman of the Board, Union Oil Co., Union Oil Bldg., Los Angeles 17, Calif.*

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OF LAND, PEARLS, AND CAPITAL GAINS

ONE DAY in 1916 a New Yorker named Morton Plant, who had amassed a fortune in traction enterprises, wandered into Cartier's jewelry store, then at 712 Fifth Avenue, and noticed an extraordinary pearl necklace. Monsieur Cartier himself showed it to him.

It was a double-strand piece of 128 matched graduated oriental pearls with a total weight of 1,712 grains, held together by two marquise diamond clasps. Years had been spent in assembling it.

"Queen Mary and the Czarina have nothing finer," Cartier said.

"And the price?" asked Plant.

"One million dollars," the jeweler answered.

Plant replied that this happened to be the value of a house that he and his wife owned a few blocks south on the southeast corner of Fifth Avenue and 52nd Street. On the Manhattan tax records, this was Block 1287, Lot 69, with the land valued for taxes at $800,000 and the building at an additional $125,000.

After some appraisals and negotiation, they agreed to trade. Cartier put the necklace into a 14-karat gold box with a diamond clasp, and Plant presented it to his young wife, Mae, 31 years his junior. They moved farther north to a mansion at 1051 Fifth Avenue, and Cartier's moved to the 52nd Street corner.

While unusual, the exchange seemed an equitable transaction; and so it was for a time. Many then rated fine oriental pearls more valuable than diamonds. The queens of Europe, Indian maharajahs, and American society women like Mrs. Plant were all partial to pearls.

No new pearl fisheries had been found in a long time, and prices for natural pearls of good quality had advanced steadily for 25 years. They had been given a further boost by the Underwood Tariff of 1913, which increased the import duty on pearls from 10 to 20 per cent.

But on the other side of the world, a Japanese named Kokichi Mikimoto was working on a pearl-culturing process that was to depreciate the value of all the natural pearls in the world.

For many years the Chinese had produced pearl-like objects by inserting beads or tiny Buddha images into the shells of mussels and later recovering them. But shapes were irregular and unattractive.

Mikimoto worked with oysters in Japan, and at first his results were no better. For years he could grow only semi-circular pearls. But eventually he found a type of mother-of-pearl inclusion around which oysters would grow perfectly spherical pearls. He exhibited a few at the San Francisco World's Fair in 1915, and after World War I they began to appear in increasing quantities in the jewelry markets of the world.

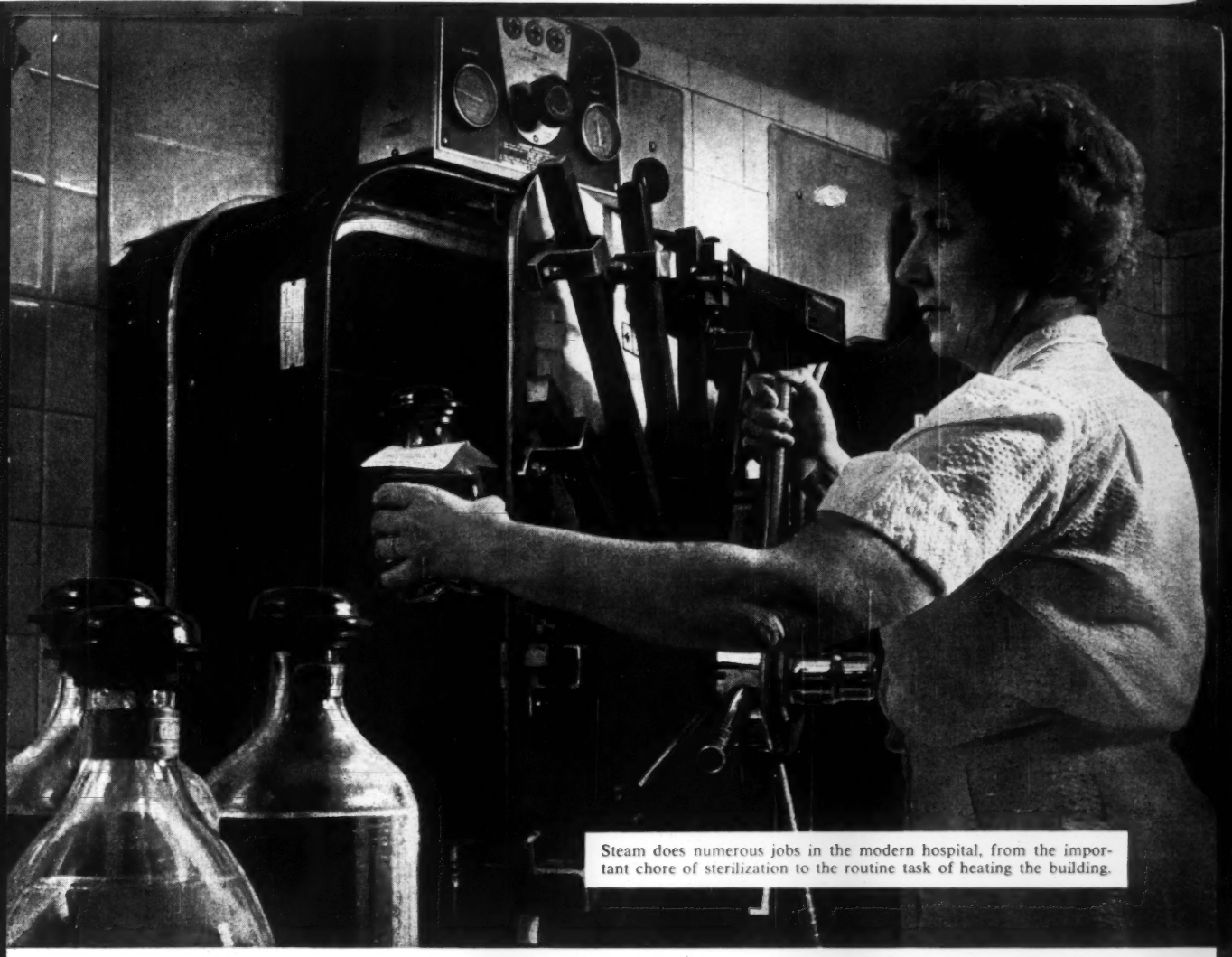
The natural pearl industry objected to his calling the new objects pearls and put all sorts of obstacles in his path. Conservative jewelers long refused to handle them. But the attractive and comparatively low-priced cultured products steadily gained popularity. Finally, Tiffany's, the last New York holdout, accepted them in 1956.

By coincidence, 1956 also saw the death of the woman who had received the fabulous necklace. By then she was Mrs. John E. Rovensky.

On January 23 of this year, the Parke-Bernet Galleries auctioned off her jewelry in New York. The famous necklace was sold in two strands, one of 55 pearls, which brought $90,000, and one of 73 somewhat smaller pearls, which brought $61,000. The gold box was bid in by the same purchasers for $1,850, making a total of $152,850 for what had once been valued at $1 million, a decline of about 85 per cent in 30 years.

What about Block 1287, Lot 69? Still occupied by Cartier's, tax records show it is now owned by the Phoenix Mutual Life Insurance Company. The tax valuation is $1.4 million for the land and $100,000 for the building. In 30 years, the real estate has increased in value about 40 per cent.

—TOM MAHONEY



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WHEN BUSINESSES MARRY

SOME CORPORATE MERGERS are the result of a natural affinity of interest; some represent a haphazard welding of services or products; some are just plain shotgun marriages with no love interest except tax benefits or fast profits. Compatible mergers require a concord of interests, a mutual magnetism because of certain advantages in raw material resources, manufacturing techniques, marketing facilities or potentials, and—above all—executive and middle managements that can be welded into a smooth machine.

The conglomerate merger can be successful, and many are, but the area of risk is far greater than in the merger of companies with related or complementary interests in the four M's of merger: materials, manufacturing, marketing, and management. We could add money and make it five M's, but money is a catalyst, and money alone is a device of the conglomerate merger that can be as dangerous as it is necessary. A company with a cash nest egg available for a risk in new fields may be tempted to go out of its range and buy up "bargains" that turn out to be management headaches.

The justifiable impulse to the conglomerate merger is the contemporary edict, "Diversify or perish." Change is the order of the day as invention, technology, and methodology are upsetting markets. "The old order changeth, yielding place to new," but there is no need to indulge in a panic of decisions. There is both need and time to research and appraise each merger opportunity in its relationship to the community, the employee, and the stockholder. The first concern is this: Can we serve the public better together than we can separated and improve our profit position?

The mere impulse to merge and eliminate competition, or to effect tax savings or simple operating economies, may not outweigh the desirable incentive that competition provides for a progressive management.

It is well to remember that the present managements of American enterprises, with few exceptions, have never been through a period of sustained depression like the 1929–1939 decade, a period that trained a hard-bitten corps of managers who could swim against the current, and who used black ink on the annual statement when the majority used red.

Experience under fire is still a valuable guide to management men. The test is increasing as the number of failures rises to a point that commands caution if not consternation. The internal pressures of material and labor costs are moving against the external pressures of price resistance, and profit margins are feeling the squeeze. The break-even point moves higher, and we have reason to wonder which tension will snap first—prices or costs.

The temptation to merge under the severe competitive pressures is increasing, and the joining of forces may help in many instances. However, the conglomerate merger may only increase the difficulties of management. There are hundreds of case histories of unsuccessful mergers where the concerns had nothing in common but a common desire to cut costs and achieve a better profit margin.

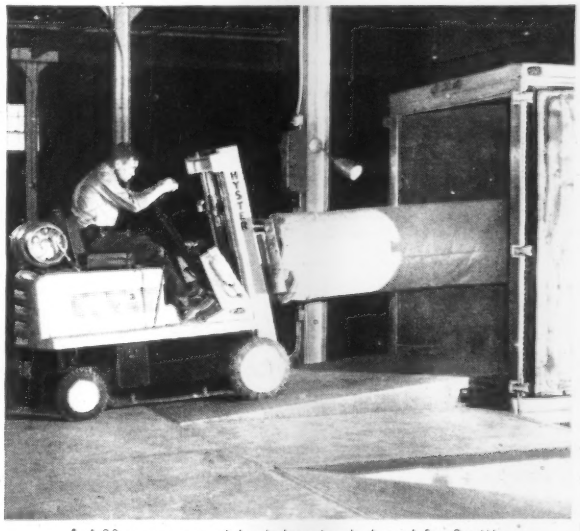
Any merger, no matter how sympathetic to the interests of the companies involved, is a jolt to the nervous system of management, a shock that sends its waves to the lowest supervisory levels. It can slow momentum temporarily and then invite a faster pace as confidence is fully restored by actions rather than words, by performance in daily routine as compared to the plan and promise of the first announcement. Or the shock may have a prolonged numbing influence on morale, as each management level asks, "What next?" Mergers are problems in morale as well as money, and the conglomerate merger or acquisition can stumble on the ancient obstacle of lack of good-will among employees, as well as among stockholders and customers. The human responsibility is as certain as it is intangible, and it cannot be treated lightly by the marriage brokers in the marketplace.

The Editors

1. Housewife selects carpet; dealer telephones Seattle sales office

2. 12:58 p.m. — sales office sends order by teletypewriter

3. 1 p.m. — warehouse in San Francisco receives order



4. 4:30 p.m. — carpet loaded on truck, bound for Seattle

How Bigelow-Sanford serves the nation from 6 warehouses

Data processing via Bell System teletypewriter makes possible same-day shipment

Now, 17 of Bigelow-Sanford's sales offices can fill a local order almost as quickly as if a warehouse were in the same city—thanks to the Bell System teletypewriter service that ties them to stock centers.

Orders received by 1 p.m. at any one of six warehouse service centers—San Francisco, Dallas, Chicago, Cleveland, Atlanta or South Hackensack, N. J.—are processed for same-day shipment.

Order handling is virtually automatic. Work output has increased four times. And branch offices get stock reports every hour.

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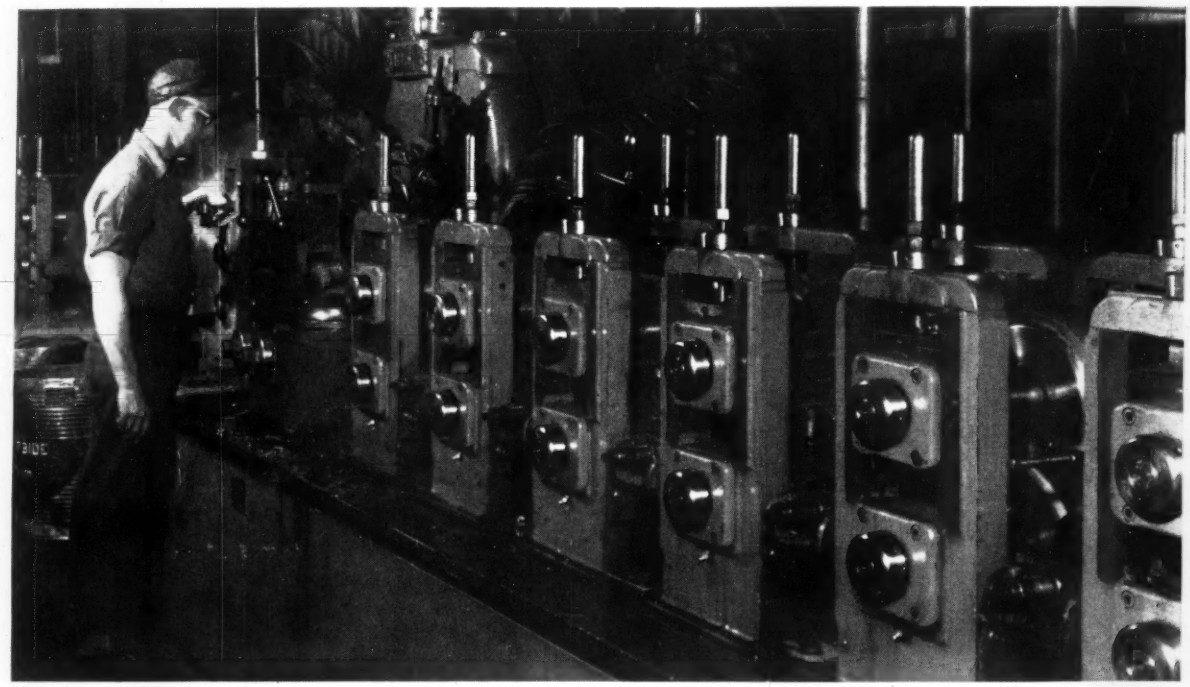
Integrated data processing may well make your own operation faster, more profitable. For information call your Bell Telephone Company business office. A representative will gladly discuss details.

BELL TELEPHONE SYSTEM

PRIVATE LINE TELEPHONE • PRIVATE LINE TELETYPEWRITER
CHANNELS FOR: DATA TRANSMISSION • REMOTE METERING AND CONTROL • TELEPHOTOGRAPH • CLOSED CIRCUIT TV

"We've simplified our lubrication and cut our bearing replacements sharply"

At Arvin Industries' Seymour, Indiana, plant all general grease lubrication is now handled with ***just one*** *lubricant—* ***Texaco Multifak.***



● **FORMING SEAMLESS TUBING** at Seymour, Indiana, plant of Arvin Industries—world's largest producer of automobile mufflers. Because of the outstanding job *Texaco Multifak* is doing here as a multi-purpose lubricant, two other Arvin plants are adopting its use.

Here's what's happened—

"Since we've gone to *Texaco Multifak*, there has been a great improvement in our maintenance efficiency. With just the one grease, we have less lubricant inventory and are always sure the right lube is being used. We've simplified our lubrication and, best of all, have cut our bearing replacements sharply."

Texaco Multifak is a premium-quality lubricant with excellent pumpability—ideal for central lubricating systems. It resists oxidation, is highly stable and provides effective lubrication over a wide temperature range and under the severest conditions.

Ask a Texaco Lubrication Engineer to help you bring these benefits to your plant. Just call the nearest of the more than 2,000 Texaco Distributing Plants in the 48 States, or write:

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The Texas Company, 135 East 42nd Street, New York 17, N. Y.

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TEXACO Lubricants, Fuels and Lubrication Engineering Service